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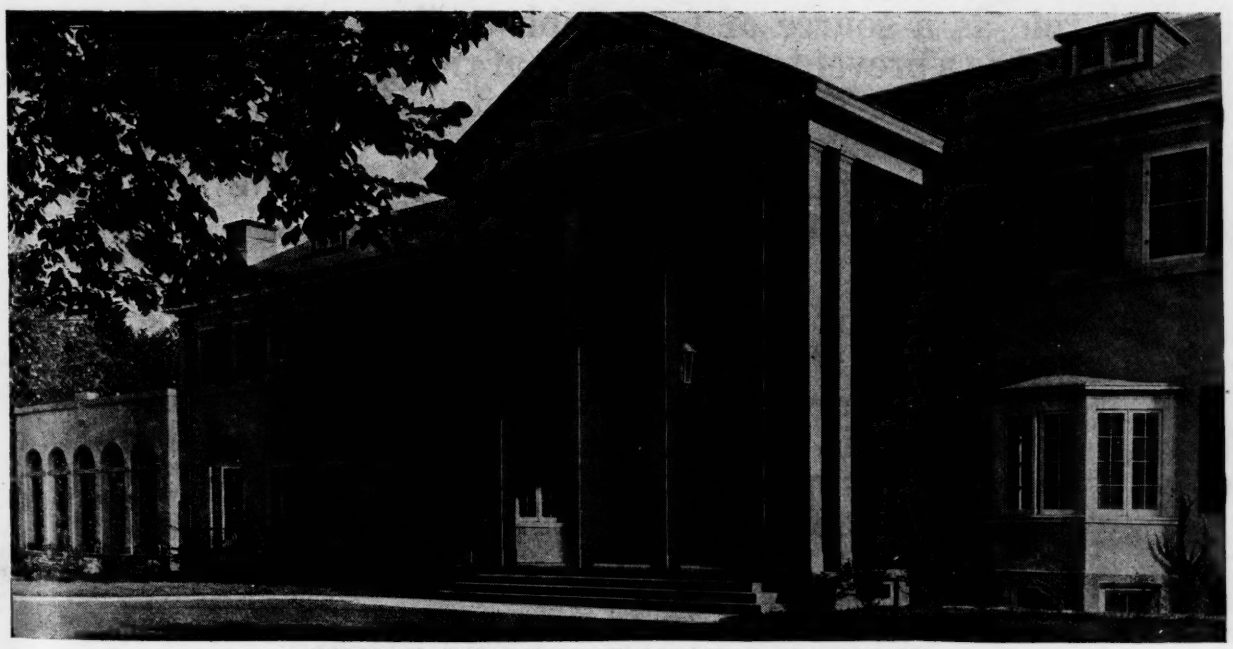

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Vol. XXIV. GRAND RAPIDS, MICH., NOVEMBER, 1925 No. 11

Original Articles

PROBLEMS RELATING TO THE LIVER AND BILIARY DUCTS*

G. W. CRILE, M. D.
CLEVELAND, OHIO

The fact that disordered liver or biliary function depresses the whole organism of the individual has been known from the beginning of medical history and the fact that operative procedures upon the liver or gall-bladder or the bile ducts are a special menace has also been known ever since these parts have been subjected to surgical treatment. The reason why these organs have such a far-reaching influence, however, has not been established, since any operation which is anatomically possible performed upon any other organ or tissue of the body appears to be less menacing both in its immediate and in its later effects than an operation on the liver or any part of the bile tracts. It has consequently been difficult to understand why such general organic deficiency as is produced by exhaustion, exertion, emotion, hemorrhage, hyperthyroidism, cancer, toxemia, general anesthesia, fever, etc., should occasion the whole syndrome of so-called billiousness; and why on the other hand liver deficiency should produce general organic impairment identical with that occasioned by any of the above causes.

It is only within recent years that as a result of laboratory researches we have come to understand that the liver is impaired by any condition which impairs the organism as a whole and inversely the organism as a whole is effected by anything which impairs the liver function. In fact, in the first place, that is, when the organism as a whole is impaired the liver appears to be more sensitive and is more extensively and intensively affected than any other organ except the brain. No comparable effect is seen in any other organ of the body. Moreover, the removal of no other organ except the brain produces so marked an effect upon the organism as the removal of the liver, which is followed by a rapid and steadily progressive failure of function on the part of all the organs of the body. This effect is even more marked than that which follows the removal of the brain itself, as, if artificial respiration can be maintained, the rest of the organism can survive for a longer time without the brain than without the liver; after removal of the liver the application of no known method of restoration or of conservation can check the steady decline of the organism to death.

We must conclude therefore, that the liver is an organ which performs a major function in the organism, a function which is at least as essential to life as are the functions of the brain, the heart, or the blood. It follows that any patient whose liver is functionally impaired is to the extent of that impairment unable to sustain an operation upon any part of the body, and the surgical risk is increased if the surgical attack of itself further lessens the activity of the liver. In planning the management of surgical operations, therefore, it becomes of prime importance to know how the function of the liver can best be protected. This pertains to any surgical operation, but it is of particular importance in abdominal operations, and of prime importance in operations upon the liver and gall-bladder and upon the common duct in particular.

As laboratory researches have indicated the fundamental importance of liver function to the organism as a whole, so also laboratory researches have pointed the way to methods of conservation of liver function which can be applied to the patient during, before and after the operation. Of fundamental importance is the application of a principle of biophysics, namely, that a change of one degree in temperature changes the chemical activity of either a physical or biological system, 10 per cent. Therefore, when the temperature of the liver is reduced one degree its chemical activity is reduced 10 per cent. Therefore if in any patient as the result of the exhaustion incident to his disease, as in cancer of the stomach, for example, the chemical activity of the liver has already been reduced to 10 per cent of its normal capacity then if when the abdomen is opened the temperature of the liver is reduced but one degree death will follow inevitably.

In an attempt to discover to what extent the temperature of the liver may fall in abdominal operations, a research was undertaken in the Biophysics Laboratory of the Cleveland Clinic, in which it was found, that when the abdomen was opened, even if the liver itself was not directly exposed, the temperature of the liver fell from one and one-half to three degrees or more, and the impairment of the organism as a whole as a result of this lowered liver temperature was indicated by the fact that the temperature of the brain also fell from one to three degrees. This progressive fall in the temperature of the brain in these cases was identical with that which followed the removal of the liver. Moreover, in animals under ether anesthesia a similar lowering of the temperature of both the liver and the brain was observed. Under nitrous oxid anesthesia on the other hand, the temperature of the brain and of the liver was but little altered.

A lowered blood pressure induced by hemorrhage also lowered the temperature of the brain and of the liver. The lack of ability of the organism as a whole to function in the absence of the liver function was demonstrated by the lack of response of the brain to the injection of adrenalin after the liver was removed. That is, normally the brain responded to the injection of adrenalin by an immediate increase in temperature of from 0.5 to one degree; but after the removal of the liver, the injection of adrenalin produced but little or no change in the temperature of the brain. In view of these findings one can well understand why the mere exposure of the abdominal viscera may cause death in a very sick patient even if no operation has been performed and no general anesthetic has been administered.

We can understand also why the addition of the general anesthetic and of the operative procedure to the exposure of the intestines may cause the death of the patient who may not be so desperately ill.

This fatal sequence of events was illustrated on a large scale during the war by the effects of abdominal operations performed during the winter months in the front line hospitals, where but few soldiers survived an abdominal operation, especially when the operation required a wide exposure of the abdominal viscera. It apparently made no difference how quickly or how skillfully the operation was performed.

Another remarkable fact established by our laboratory research was that the introduction or application of heat within the abdomen which in most of our experiments was accomplished by the introduction of hot water into the stomach, produced not only an immediate rise in the temperature of the liver, but also a rise in the temperature of the brain; and of special significance was the observation that the rise in the temperature of the brain occurred one minute or even more before the increase in the temperature of the liver was noted.

It would appear, therefore, that the application of heat to the liver should counteract the effect of the exposure of the viscera in an abdominal operation upon any patient, and in particular in operations on the liver or on the bile ducts.

Attempts have been made to meet this requirement by hot water pads, hot tapes, the use of a hot-water mattress, and a superheated operating room, but none of these methods have satisfactorily met this crucial need.

Recently it occurred to me that the application of diathermy would be an ideal method for holding the temperature of the liver at or about the normal level. The principle of diathermy is that the passage through the tissues of a current from a specially devised apparatus heats the tissues. Therefore, if one pole of the diathermy apparatus were placed upon the lower chest on one side and the other brought opposite the dome of the liver, then the current would pass through the upper abdominal organs including the liver; and since this current would be continuously applied during the operation, the temperature of the liver and of the abdominal viscera in the track of the electric current would be maintained at or above the normal, regardless of the exposure of the intestines. It must be borne in mind that on account of the enormous spread of the capillaries, veins and arteries very near the surface of the viscera, the blood in the whole splanilinic area almost immediately assumes the temperature of the air to which it is exposed. It is almost as if the blood in one part of the circulation were spread out in a thin layer on a great table and were then collected and again placed in circulation. By the passing of the diathermy current through the liver and the neighboring viscera this thin layer of blood is, as it were, made to pass over a hot table, so that warm, instead of cool blood passes into the rest of the circulation.

The electrodes can be put in place and the diathermy current established before the abdominal incision is made and neither the surgeon or the patient need be aware that such a current is passing, as the use of rubber gloves completely insulates the hand of the surgeon.

We have found by actual observation that by this means the temperature of the dome of the liver can be maintained above normal throughout an operation in which the abdominal viscera are widely exposed.

The higher incidence of pneumonia after ab-

dominal operations than after operations of an equal magnitude on other portions of the body is well recognized. In view of this fact, and in view of the facts which we have cited one might well question whether or not this is the result of the cooling of the blood in the important organs within the chest plus the general depressed function of the organism as a whole as the result of the cooling of the liver. We are therefore, now noting whether or not the maintenance of a constant temperature in the liver and other abdominal viscera by the use of diathermy is lessening the incidence of post-operative pneumonia.

In addition we are using repeated doses of diathermy after operation in feeble and aged patients, and after especially wide and prolonged exposure of the upper abdomen, delivering the dose through the bases of the lungs, as this is the area where post-operative pneumonia is initiated. In addition to the advantage of heat, the increased temperature must induce a more active circulation in this area and thus increase the defense against infection. As shown above, a lowered temperature of the liver, hence, impairment of the whole organism may be induced by ether anesthesia. While this effect may, to some extent, be counteracted by the application of heat, the best method of protection is to substitute for ether the anesthetic which our researches have shown produces very slight lowering of the liver temperature, namely, nitrous oxid; and in especially bad risk cases not to allow the patient to pass beyond the stage of analgesia, relying principally upon regional anesthesia.

In addition to the above factors of danger which pertain to all abdominal operations—the lowering of the temperature of the liver, the inhalation anesthetic, and the lowering of general blood pressure by surgical shock, there are certain factors which pertain especially to gall-bladder operations. The most important of these are: interference with circulation in the splanchnic veins and the presence of free bile in the peritoneal cavity.

The principal source of interference with circulation in the low pressure splanchnic veins is the packing of gauze pads down upon the surface of the liver. It should be borne in mind that when operating upon the biliary passages, upon the common duct in particular, one is impinging upon the most important net work of sympathetic nerves and ganglia in the entire abdomen. In fact the center of the entire sympathetic system is within this zone. The position of the surgeon in this respect might be compared to that of an electrician called upon to make an important repair upon the switchboard of a great telephone system or within the control station of a great battleship. It must be borne in mind also that this intricately wired system is exposed not only to the immediate technic of the operator, but also to contact with the drains and later damage from adhesions.

The danger from bile in the peritoneal cavity is not always clearly appreciated, but experience has shown that the contact of bile with the free peritoneal surfaces produces a destructive effect locally and depresses the entire organism. If jaundice exists at the time of operation, therefore, or if bile escapes into the peritoneum during the operation, the operative risk is markedly increased.

Two controversies have held the field ever since the first operations upon the gall-bladder were performed: (1) Whether cholecystectomy or cholecystotomy is the method of choice; and (2) whether drainage should or should not be employed after cholecystectomy.

CHOLECYSTECTOMY VS. CHOLECYSTOTOMY

If stones are present, if the gall-bladder is thickened, if it is not blue, if its walls are not materially changed in texture and in color, and there is considerable fat on the outer walls, if the pilot gland of Lund is felt, the gall-bladder is removed. If the pathological signs are less distinct, then, provided a canvas for other causes of the patient's symptoms has been made and the appendix, the pancreas and the genito-urinary tract have been found to be guiltless, the surgeon often decides that since the stage is set and since the gall-bladder is not an organ of vital function, it may as well be removed. It is in this group of cases that the highest percentage of clinical failures are found.

As for cholecystotomy, it may be said that the operative mortality is slightly lower in the bad risk patient. Aside from this fact, however, it should be borne in mind that while in the case of a damaged gall-bladder wall, the results of cholecystotomy are good, they are not as good as those of cholecystectomy; that in the case of a strictured cystic duct cholecystotomy is a futile operation; that it is certainly debatable whether drainage or excision of the gall bladder gives the most desirable results in cases of stones floating in normal bile within the nearly normal gall-bladder walls. On the other hand, it must be remembered that the final clinical effects of cholecystectomy have not yet been confirmed, therefore, a general, final, decisive answer to this question can not as yet be made.

The points of view of my associates and myself regarding the relative value of these two types of operations is indicated by a study of our records which shows that prior to 1921 the ratio of cholecystectomies to cholecystotomies was as 31 to 69, whereas since 1921 the ratio is as 83 to 17.

As for the technic of cholecystotomy, two

principal cautions may be emphasized, (1) the gall-bladder should not be attached to the abdominal wall as the effect of the heavy dragging upon it of the liver can not fail to be unfavorable; and (2) a drain should not be inserted beside the gall-bladder, emerging from the abdominal wound. If drainage is necessary it is least harmful in Morrison's pouch, emerging laterally.

As for the technic of cholecystectomy, the following points are essential: (1) the gall-bladder must not be opened; (2) not even a single liver cell should be wounded; (3) the cystic duct and the cystic duct alone should receive the ligature; (4) the common duct must not even be crowded by the ligature; (5) not even a fragment of the base of the gall-bladder should be left; (6) the field should be kept constantly so clear that an accessory or abdominal duct can be seen; (7) in general the duct and the artery should be tied separately, although if the common pedicle is small, there would seem to be no risk in tying them together; (8) to prevent adhesions, to minimize oozing, to control the transudation of the capillary bile, the raw surface of the liver should be closed by means of a fine round curved needle, the stump being buried beneath the suture line.

DRAINAGE

Many, perhaps most of the clean cholecystectomies may be closed without drainage, yet occasionally there will come an unusual case, apparently the easiest and cleanest of all, from which bile leaks in some way and the patient is threatened with, or may even die from bile peritonitis. Bile leakage obeys no law. It is the outlaw of upper abdominal surgery. Its possible explanation is that some small adherent bile duct, through which a small hepatic area is drained directly into the gall-bladder, is unintentionally or unknowingly divided so that after the wound is closed, it oozes unnoticed until bile peritonitis is established. This occasional occurrence supplies the argument for drainage.

Against drainage there are the charges that it causes adhesions; that it creates a well rather than a stream, that is, that too much fluid must first accumulate before it escapes; that convalescence is slower; that it causes a protracted and considerable functional disturbance: In the past we have insisted upon these objections as if an up-hill drain were the only drain, whereas there is a quite ideal alternative, that is, the route through Morrison's pouch, which is effective and free from the objections listed above. First, it is dependent, hence there is no resultant pull; second, the resultant adhesions are not at such vulnerable points as those caused by an anterior drain. By employing this method of drainage which we use after every cholecystectomy, the abdominal incision can be closed completely, thus avoiding a weak scar.

OPERATIONS ON THE COMMON DUCT

In cases of *common* duct obstruction the prime damage is due to the depression in the liver function as a result of its engorgement and distention with bile. It follows that when that operation is required in the presence of jaundice and resultant depression of the liver function, it is especially important that the measures we have already indicated be scrupulously applied, and that special measures for the conservation of the internal respiration of the liver cells be employed. It should be borne in mind in these cases in particular that the function of the liver is depressed by narcotics, especially by morphine; narcotics, therefore, are contraindicated both before and after operation. Blood transfusion promotes the oxygenation of the cells, and water should be given by mouth and by hypodermoclysis. In grave cases, the operation should, if possible, be divided into two distinct physiological stages. The first stage should include only such measures as are required for the relief of the biliary obstruction, wholly disregarding any maneuver for the removal of the stones unless they are in the way. If the gall-bladder is distended, it should be drained by a fluid tight system, decompressing it slowly by intermittently unclamping the rubber drain. The ultimate operation can well be delayed until the danger point is passed, and the stability of the liver cells and of the brain cells has become established.

As to the operative technic in jaundiced cases, we are committed to ample exposure, that is, to a long incision; but if the gall-bladder is distended, a short incision, for merely establishing drainage, may be all that is required, especially in aged patients with large gall-bladders which are easily defined prior to operation. A very short incision immediately over the gall-bladder for the insertion of the drainage tube may be so conducted as to become almost a minor operation. On the other hand in broad-chested, fat patients, jaundiced as a result of the obstruction from common duct stones, the Bevan or the Kocher incision may give a better exposure than a vertical right rectus incision.

In cases of common duct stones associated with chills, prostration, etc., in which the gall-bladder offers an avenue of temporary relief by drainage, the operation is divided into two parts, the first consisting of gall-bladder drainage only, followed later by a curative operation on the common duct.

If forced to operate in the midst of chills, prostration, etc., in a jaundiced case in which

the gall-bladder is usually a shrunken mass of scar tissue containing no bile, while the common duct is dilated, the common duct is dealt with as follows: With a syringe, much of the bile is drawn off; in part to prevent contamination of the field when the duct is opened, in part to determine the kind of bile, the presence of pus, etc. The common duct is then opened and the stones in the immediate field removed, but no difficult and prolonged search is made, not even a prolonged effort to dislodge a stone in the duodenal part of the duct; but drainage—rubber tube drainage—sewed in to make a fluid tight connection with the common duct, completes the technic. An abundance of drainage is placed around the point of common duct drainage and a generous portion of the incision in the abdominal wall is left open to ensure a safe drainage.

At the conclusion of an operation in which the entire biliary tract is not clearly defined and explored by the usual common and hepatic duct instrumentation, associated with the usual manipulation and palpation—that is, an operation completed without definite knowledge as to the number and location of stones—the surgeon has an uncomfortable feeling of suspended judgment, but he has his patient, who may be cured on another and more auspicious day.

SUMMARY

The evolution of our method of management of operations upon the liver and biliary ducts as based upon 77 operations on the liver, and 1,701 operations on the gall-bladder and ducts may be summarized as follows:

(1) Before operation employ saline infusion, the subcutaneous injection of 3,000 to 5,000 cubic centimeters of water repeated as indicated.

(2) In jaundiced cases delay operation until the clotting time of the blood has been reduced by calcium.

(3) Avoid narcotics.

(4) In grave cases divide the operation into two stages.

(5) Apply heat to the liver and upper abdomen, during and after operation, by diathermy.

(6) Employ the transfusion of blood as indicated.

(7) Employ analgesia and regional anesthesia.

(8) Employ dependent drainage through Morrison's pouch.

(9) Strictly individualize each case.

(10) Fortify the defense throughout by promoting liver function.

THE HISTORY AND EXAMINATION OF PATIENTS

(The Following Papers Were Presented at Our Annual Meeting in the Symposium on the above titled subject.—Editor.)

THE HISTORY AND EXAMINATION OF THE PATIENT, FROM THE MEDICAL POINT OF VIEW

ROGER S. MORRIS, M. D.
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The examination of a patient consists of three parts: (1) history, (2) physical examination, and (3) laboratory examinations. In the majority of cases no one of these is sufficient for an accurate diagnosis, and to give the patient the best service all three methods of examination should be practiced.

For medical students who are learning the art of history taking and examination, it is desirable to have a full history, but the experienced clinician seldom finds it necessary to enter negative data in his notes. The history consists of the family history, past history, and history of the present illness.

In the family history, hereditary diseases, such as hemophilia, are of importance. There may be a family tendency to early arterial disease or to diabetes mellitus. All such facts may be important in diagnosis.

In the past history, one should note the general health of the individual and also any serious illnesses, including contagious diseases and operations, if any. The occupation of the patient at times furnishes clues of great diagnostic value, as in lead poisoning, carbon monoxide poisoning, tularemia, etc. In addition to these points, one should make inquiry into the various systems, the cardio-respiratory, gastro-intestinal, genito-urinary, neuro-muscular, bones and joints; the weight, including fluctuations, and the height are recorded. Diseases of the organs of special sense—eyes, ears, nose—are often important. The importance of focal infection is so generally recognized at the present time that it is apparent to all that a history of diseased tonsils, sinuses, teeth, gall bladder, prostate or tube may have a decided bearing in an individual case.

I know of no rule which will enable a novice to take an accurate history of the present illness of a patient. The questions to be asked will depend on the nature of the illness. Of course, leading questions are to be avoided, and in the case of more intelligent patients, it is well to let the patient first give the story of his illness in his own words. Certain aspects may then be amplified by questioning the pa-

tient. One's success in obtaining the history of an illness—aside from the variable factor, the patient—depends upon patience, skill, clinical experience and the general medical knowledge of the physician. In obscure cases the history may be of the utmost importance and may require considerable time. One of the foremost diagnosticians in this country considers the history of such fundamental value in reaching a diagnosis that he uses his valuable time in taking his own histories of the patients who consult him, rather than to trust to a less experienced assistant.

Having completed the history, one passes to the physical examination, which requires stripping the patient at least to the waist, and preferably removing all the clothing.

The physical examination should be thorough, and to attain this one should have a definite routine of examination to avoid omissions. After noting the general state of nutrition and build, one observes the color and texture of the skin and any cutaneous lesions, subcutaneous swellings, etc.

The head is next examined. In the eyes one should test the pupillary reflexes, note the color of the sclera, test the external ocular movements and examine the fundi with the ophthalmoscope. The visual field should also be tested roughly. The ears should be inspected for discharge and tophi and the hearing roughly tested with a watch. If there is a history of otitis, the auroscope should be employed. The nose, mouth and throat should likewise be examined in all cases.

The neck should be inspected and palpated for possible goiter, enlarged glands, abnormal pulsation, etc.

Examination of the thorax includes a complete physical examination of the lungs, pleura, heart and great vessels and the mediastinal contents. Obviously this can only be done when the clothing is completely removed. In the examination of the lungs, ausculatation is probably the most important method, whereas in cardiac work, palpation and percussion give more valuable information than auscultation, as a rule. But the only safe plan is to inspect, palpate, percuss and auscult in all cases. Blood pressure determinations and palpation of the superficial arteries, noting sclerosis, tortuosity, aneurysmal dilatations, form a part of the routine examination of all patients.

Next, the abdominal organs are studied by means of inspection and palpation and percussion, and any abnormalities noted. Rectal and pelvic examinations are often indicated and are included in the routine examination of patients by many clinicians.

The external genitalia, the bones and joints, the muscles, the superficial and deep reflexes, the superficial lymph nodes, the extremities are likewise examined, completing the general physical examination.

Laboratory examinations will vary in individual cases, but the routine examination of all patients should include a urine examination. A blood examination often yields information essential to the diagnosis. Gastric analysis, stool examinations (a greatly neglected field), examinations of the sputum, cerebrospinal fluid, chemical or serological examinations of the blood will at times be needed to clear up a diagnosis. Roentgen ray examinations of all parts of the body have proved to be so valuable as aids in diagnosis that no emphasis is required as to their importance. There is a danger in the use of the X-rays in diagnosis to which I wish to allude. All too frequently one sees the physician neglecting the physical examination of the patient, trusting the X-ray to reveal all. No greater mistake can be made. A complete physical examination should always precede X-ray studies, and the latter should be interpreted in the light of the history and physical findings. The physician who leans too heavily on the X-ray soon loses his skill in physical examination, and not only his practice, but his patients suffer. It is rarely possible with any laboratory examination alone to arrive at a satisfactory diagnosis. What does positive Wassermann reaction tell one, if the history and physical findings are not known? What does an eosinophilia, a leukocytosis, an albuminuria signify if one has not the clinical data of the case? Even the finding of asexual malarial plasmodia in the blood does not necessarily mean that the patient is having chills and fever. The laboratory findings are often the determining factor in elucidating a diagnosis, but without the data derived from the history and physical examination, the clinician cannot expect the laboratory worker to make the diagnosis for him.

In certain cases, special procedures will be indicated, such as cystoscopy or ureteral catheterization, perimetric determination of the visual fields, examination of the nasal accessory sinuses, requiring consultation with specialists.

That time spent in carefully studying patients is richly rewarded must be apparent to all. Patients appreciate careful, thorough examinations and send their friends to the doctor who studies his cases. The value of keeping notes cannot be over-emphasized. No man can remember long the various details of an illness. Unless notes are made, the past soon becomes a guess, more often wrong than right. One doing a consulting practice cannot fail to be struck by the fact that, as a rule, it is those physicians who make and record careful studies of their patients to whom the best class of patients go for advice.

If you will permit me, I should like, before

closing, to illustrate the necessity of a complete study of the patient by citing a few cases.

Case No. 1. The first case that I would like to refer to is one which I saw a number of years ago, a man who gave a history of fainting spells, associated with gastric disturbance. It was thought, from the history of these fainting spells and from the fact that at one time he had a rather slow pulse, that his trouble was cardiac, and he was referred to a heart specialist for examination. A very careful physical examination of the cardiovascular system was made, including X-ray examination of the chest, electrocardiographic and polygraphic tracings, and the man was told that functionally his circulatory apparatus was normal, and he was sent home.

About a month later, when I first saw him, on making a physical examination of the patient, a carcinoma of the pylorus about the size of a lemon was palpable, a finding which must have been present when he consulted the heart specialist, but which was missed from the fact that the man looked upon the heart as not being related to the rest of the patient's body, and the symptoms were misinterpreted as cardiac when apparently they were gastric.

The patient had his pylorus resected and was well for two or three years afterwards, when I lost track of him.

Case No. 2. Another case that I would like to mention was one that I saw last fall in whom a diagnosis of angina pectoris had been made. The patient was a man about forty years of age, whose chief complaint was nocturnal attacks of dyspnea. These attacks were not associated with pain, and on just what grounds the diagnosis of angenia pectoris had been made I am not sure. In this particular case the diagnosis depended chiefly upon the history and laboratory findings. The patient had these attacks with great regularity, and a striking fact in regard to his attacks was that they came on within a half hour to an hour after going to bed. He never had the attacks during the daytime. This fact suggested, of course, the possibility of some protein sensitization, and in making skin tests for protein sensitization it was found that the man was sensitized to the protein in goose feathers. Substituting a hair pillow for his ordinary bed pillow completely relieved him. He has had no attacks since then, with one exception when he took a trip on the sleeper and forgot to take his hair pillow along with him. He thought he would try it out; he slept on the pillow that was in the sleeping car, and promptly had another attack.

Had that man's history been gone into more thoroughly, I don't believe a diagnosis of angina pectories would have been made. Certainly, there was nothing in his history to justify such a diagnosis.

It is not unusual to have patients sent in to the receiving ward with a diagnosis of acute appendicitis and labeled for an emergency operation. The majority of times, of course, that diagnosis correct, but every now and then the surgeon finds nothing and returns the patient to the ward, and the next day there is a manifest lobar pneumonia. The studies that Joseph Capps of Chicago has made have shown very definitely that inflammation of the diaphragmatic pleura causes pain which is referred to other parts of the body. From the central part of the diaphragm the pain is referred through the phrenic nerve to the neck, particularly along the trapezius border, whereas from the peripheral part of the diaphragm the pain is referred to the abdomen or to the backin the lumbar region through the lower dorsal segments.

In patients in whom there is any question about an abdominal lesion, in making a physical examination one should always keep in mind the possibility—where there is fever, leukocytosis, abdominal pain—of a diaphragmatic pleurisy causing reflex or referred abdominal pain.

Since Capps' studies were reported some ten years ago, we have had in the neighborhood of 140 cases of diaphragmatic pleurisy on the medical service at the Cincinnati General Hospital. Before we began looking for the pain along the trapezius border, for the superficial skin tenderness that Capps pointed out, for the other evidences of diaphragmatic pleurisy, it was not uncommon to have patients operated on for supposed gall bladder disease, appendicitis, or what-not, when no such lesion was found, and where, if we had known how to recognize diaphragmatic pleurisy, operation might easily have been avoided.

Such cases do not come to the operating table as often as they did ten years ago, but there are still too many operated upon.

Case No. 3. Another case that I saw a good many years ago I would like to refer to. It was a somewhat similar case. A young man was sent to a hospital with fever, with a leukocytosis of 17,000, with a palpable mass in the lower right quadrant and severe pain, and also with gastrointestinal symptoms. The patient was thought to have an appendiceal abscess. Operation was performed and no abscess was found, but there was a large mass of succulent lymphatic glands in the lower right quadrant corresponding to the mass which had been felt. The abdomen was closed and only after the operation was the blood stained and a differential count made, which showed that 98 per cent of his leukocytes were lymphocytes. The man had an acute lymphatic leukemia and was dead within a week. Had the examination been more thorough, had a routine stained smear of the blood been examined, the patient would have been saved operation, and a correct prognosis would have been made.

One cannot neglect thoroughness of work if one is going to try to avoid pitfalls in diagnosis. One might go on citing such cases without end. Cases of brain tumor are overlooked because of carelessness in examination, failure to examine the fundi. The differentiation between uremia and diabetic coma, of course, is easy if one does a urine examination, but a differential diagnosis between uremia and cerebral hemorrhage is not always so easy. In such cases study of the chemistry of the blood, study of the urine, functional studies of the kidney, will sometimes help one clear up the diagnosis

before the patient dies or before the natural course of the disease makes it apparent.

The extent of medical knowledge has increased to such a degree that it is impossible for any one man to master it all. The result has been the development of various specialties. Too often, the young graduate enters a specialty without any general clinical knowledge. Were the body composed of various parts having no relation to one another, such a course might be justifiable. No physician, no matter what his specialty, can do full justice to his patients or himself unless he regards the body as a whole.

In his classes, the late Sir William Osler, one of the greatest personalities that clinical medicine has produced, was accustomed to emphasize the fact that the first essential in treatment is an accurate diagnosis. This brief outline indicates in a general way the kind of examination which patients have a right to expect when they consult a physician. There is no short cut to a complete diagnosis, and the successful clinician must ever remember the words of John Hunter: "Don't think; try. Be patient. Be accurate."

THE HISTORY AND EXAMINATION OF THE PATIENT, FROM THE SURGICAL POINT OF VIEW

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I have first to acknowledge the courtesy of the Michigan State Medical Society in giving me the opportunity of meeting with it. I feel very strongly that it is a sign of the times when so many men are willing to give up their duties for a period and attend such meetings. It is essential in the life of every individual that he should have the opportunity of meeting with his confreres, with some fellows from the outside, thus refreshing his memory, possibly with things that he already knows, but coming in contact with men who are doing similar types of work.

At the time I accepted the invitation I did not know that mine was one of a series of papers along the same line, and what I surmised has happened, that Dr. Morris has very largely covered the territory with which I had planned to deal. So what I have to say to you must come largely from an experience of teaching, and will smack more or less of the academic, but that is not an unmixed evil.

As I understand your executives have decided, it is possibly wise for most of us to get back to our student days, not to revise our thinking, but to think again the things that we thought at those times, possibly from the viewpoint of the newer atmosphere.

The research of Pasteur and the clinical application of these findings by Lister have made possible in surgery the exploration of all regions of the body in a way probably never dreamed of by those members of our profession who practiced surgery in pre-Listerian days. It should not be forgotten, at the same time, that with this increased and ever-increasing opportunity, there also comes an increasing responsibility on the part of the modern surgeon.

The ease with which one can explore, with comparative safety, the recesses of the abdomen, the chest, or even the skull cavity, tempts many to adopt this exploratory method of making a diagnosis, rather than the more indirect and often more difficult method of careful study of the history and clinical examination of the patient. The experience of every mature surgeon proves that the exploratory operation is not as free from danger as has been believed. The patient on whom any such operation has been performed cannot be expected to be as well as if no such procedure had been followed. Always some pathological condition remains, such as adhesions of disturbed viscera, weakness of the wall of the cavity explored, and the mortality, especially in patients beyond middle life, is not inconsiderable. The speaker would not like to be considered as proposing the abolition of necessary exploratory operations, but would like to be thought an advocate of careful weighing of all available data in the attempt to arrive at a true diagnosis before operative measures are considered.

In these days, it seems easily possible for any surgeon of reasonable ability and application to master the modern technique of the surgery of all regions of the body. If this be true, then the practitioner who aspires to become a master of surgery should place the emphasis on diagnosis and surgical judgment. Surgical judgment is probably most largely the result of wide experience, and, of course, this can be acquired only by process of time in a large operative clinic, with painstaking observation and a noting of the findings of each case. For the younger surgeon this process is facilitated if he has had the opportunity to work for possibly a long period in close association with a mature surgeon who has already attained this desired position.

Accuracy of diagnosis, however, may be accomplished by painstaking labor, together with systematic and accurate observation and critical analysis of all findings, combined with confirmatory details of laboratory findings. It is undoubtedly true that nearly all of the great advances in medicine, both from a therapeutic and diagnostic standpoint, have originated from laboratory researches, and there is nowadays a tendency on the part of most of us to accept the short cut method of diagnosis offered us by

the more or less mechanical method of the laboratory.

I was very pleased to hear Dr. Morris deprecate this from the medical standpoint, as we are becoming more and more satisfied that it is a fault from the surgical standpoint.

Such a diagnosis, made in most instances without a knowledge of the clinical findings, is apt to be fallacious, and the object of such a paper as this is to stress the necessity of careful history taking and clinical examination of the patient. Before the laboratory played such a prominent part as it does now, the diagnostician was faced with the necessity of carefully noting and estimating the value of every detail of the history of his patient. This was followed by a keen physical examination, and from the information thus gleaned many of our predecessors became wonderfully proficient in the art of arriving at an accurate diagnosis. It is surely a desirable aim to attempt to hold all that our fathers in the profession learned and to cultivate the keenness of observation, the facility of touch, and the instinctive or intuitive faculty of these men, of whom Hilton Fagge is a worthy representative, and at the same time to add our own modern methods.

In attempting to secure the history of a patient with a surgical ailment there should be the same systematic approach that is usually followed in the case of a medical patient. It may be there is a point of weakness in the teaching in our medical schools in this regard, as most of the teaching of physical examination is carried out in the department of medicine. The best history will be obtained by one who repeatedly and carefully follows a systematic plan of attack. The first history taken by a student will not be very valuable or very helpful in arriving at a correct conclusion, but with increasing experience he will succeed in obtaining the salient facts and will avoid the irrelevant.

The value of a history depends a great deal on the intelligence and honesty of the patient, and to a somewhat similar degree on the accuracy of his memory regarding the past, especially if the story covers a long period of time. Some patients err in omitting facts which they consider trivial or because they are fearful of being considered neurasthenic; many more, consciously or unconsciously, color their statements to fit their ideas of their ailments, and many exaggerate their symptoms in order to duly impress the surgeon with the seriousness of their complaint. To elicit and evaluate properly these various factors requires imagination, intuition and judgment. For the most part it is essential to get the patient to tell his story chronologically and with as few leading questions as possible. After obtaining the entire story, any obvious omissions may be filled in by a species of cross-questioning skilfully carried out. As a matter of statistics, it has been proven that a very large percentage of statements made in such a recitation of supposed facts and subsequent cross-examination are erroneous. Hence the effort to make a diagnosis by giving the history a 100 per cent value will tend to faulty conclusions if the history is only 50 per cent or less dependable.

I have noted the absolute necessity of following the routine method of a general examination after the examination of a special part is considered, as is noted by Dr. Morris. I don't propose to detain you by rehashing any of the statements which he has said better than I can say. I would just like to reiterate, however, that the necessity for the general examination of the patient suffering with some particular supposed condition is as essential in the surgical examination as in the medical examination. The examination of the special condition should be followed very definitely by a general examination of the patient, and it is only in this way that we can hope to arrive at a fairly accurate estimate of the patient's condition, and we will be apt to uncover conditions which are absolutely essential in arriving at a conclusion.

For instance, we come in with a patient who has an ulcer on the sole of the foot. It may be a traumatic condition from a bruise, or it may be a burn or a simple traumatic ulcer, and if we simply examine the foot, it is quite possible that we would be willing to accept that as a reasonable diagnosis.

If, on the other hand, we have gone carefully through the general examination of the patient and we have found that this individual has a glycosuria, then it is quite within reason that we would suggest that this ulcer might be or probably would be a diabetic ulcer.

On the other hand, if in a similar condition we found in the examination of the nervous system that a man had a hairy growth possibly over the lumbar spine, or a mass of lipomous tissue over that same region in the lower lumbar spine, we would drop at once on the fact that he probably had a spina bifida or a spina bifida occula, and that the changes in his spine were responsible for the ulcerated condition.

That is simply by way of illustration of the necessity of the general examination in practically all cases.

Now may I digress from the general subject which was given to me, and consider with you for a few moments the method of examination of a specific region. It is obviously impossible that one man should cover the examination of the entire regions of the body from the surgical standpoint in a brief period such as allotted, and wisely allotted. As a consequence, if we are going to get anything of concrete value out of it, it seems to me that possibly it might be wise for me to take a specific region of the body and attempt to bring

out the factors which might be helpful in the question of examination and subsequent diagnosis, because in the long run the examination and the history taking, painstaking as each should be, are simply factors in an effort to establish a diagnosis that the patient may be better treated.

I shall take the subject of the abdominal condition, just as an illustration of the method of attack which we put before our graduating classes, for instance, in helping them or attempting to help them to develop a system by which they will probably arrive at a saisfactory conclusion and avoid the pitfalls so well brought out in the suggestions made by Dr. Morris.

I tackle the problem in this way. If you have a condition of which the disability complained of is in the region of the abdomen, that does not necessarily mean that the pathological condition is in the abdomen. It was noted by my colleague on the medical side that certain chest conditions are followed by symptoms referable to the abdomen. So if you keep that in mind, the moment you have a complaint of that sort, instinctively and as a matter of routine you will think along such lines as this: that this may be, must be, as a matter of fact, either an intraperitoneal or an extraperitoneal condition. It is so easy to jump at the conclusion when a man has a pain in his belly that it is such a condition; it may not be. It is wise to have a routine method of examination in order that everything may be considered.

If you start with the extraperitoneal condition, it must be in one of four regions, either anterior to the peritoneal cavity, posterior to it, above it or below it. Those are mechanical problems. On the anterior you know that you have only certain conditions that can happen, a condition of the abdominal wall, possibly troubles in the umbilicus. Then when you have got nearly as far as you can get, consider that these conditions (and I give this suggestion to the student to make it more easy for him to comprehend) may be traumatic, may be inflammatory, may be congenital defects of some sort, or may be a new grwoth of various types. Those four groupings will cover, to a very large extent, nearly everything that will happen in these various regions.

If you have no history of injury, that excludes the first one, the traumatism. If you have, you may have a hematoma, a rupture of muscles, an infection later in the hematoma, but the starting point is with the hematoma. The illustrative type there is probably the abscess from the inflammatory condition, because there are very few things of an inflammatory nature in the anterior wall.

Then in the neighborhood of the umbilicus the congenital defects are the urachus, patent urachus, or the omphalomesenteric duct, patent Meckel's diverticulum, and these may be a source of trouble from an anterior standpoint.

Behind the peritoneum you will have certain structures which must be constantly kept in mind in the examination of the abdomen, noticeably the kidney. How many men have been puzzled for a time with regard to the stone in the kidney giving signs of abdominal distress and pain, even simulating very closely obstructive symptoms? I am quite sure that is within the range of possibility. Yet if we remember that it is only a matter of following up the urinary findings and making a careful examination, possibly aided by the X-ray, one can eliminate the possibility or probability, at least, of kidney conditions.

Wth the kidney condition, such retroperitoneal masses or tumors as illustrated by Dr. Morris, various types of glandular enlargement behind the peritoneum must be considered in estimating whether your lesion is intra-abdominal or extra-abdominal.

I insist on one other condition, which is often forgotten: it is that the spine is behind the abdomen and is often a factor in the production of symptoms which simulate abdominal ones very closely. Probably the most frequently overlooked is that of tabes dorsalis. It only needs a careful examination of the neurological system to pick out the question of tabes and eliminate the radiating pains of tabetic conditions.

Potts' disease is frequently overlooked, with its radiating pain in the lower dorsal and upper lumbar region. Careful examination of the spine is frequently overlooked by the medical man, and we have had in the surgical side numerous instances of Potts' disease of the spine being sent over from the medical side for operative procedure. So the spine should be carefully examined as well.

Above the peritoneal cavity are those factors of which Dr. Morris spoke which I would like to emphasize—the question of basilar pneumonia or diaphragmatic pleurisy and pericarditis. Unquestionably from time to time pericarditis will give you abdominal symptoms whose origin it is very difficult to determine unless a careful examination is made. I am quite sure my medical friends will admit there are some cases of suspected basilar pneumonia or diaphragmatic pleurisy which cannot be determined by physical examination by the medical man, and yet have the signs of pain in the abdomen. There I am perfectly sure that the proper team work between the medical man and the surgeon will result in the elimination of a probable operation.

The type that I want to speak of particularly is that type of lower pneumonia in the child before it gives any symptoms at all, centrally located possibly in the base, or spread-

ing to the diaphragm. The chief factor that you have in conjunction with a lesion of that sort in the chest above the diaphragm is not only pain, but rigidity, and it is the rigidity that is misleading from the surgical standpoint, because it is upon that factor that we largely depend for the criterion as to the inflammatory changes inside the abdominal cavity. There is one factor about the rigidity which ought to be carefully noted, and that is that it is not persistent, that with the respiratory changes the muscle guard lessens, so that if one keeps a constant pressure over the muscles it is only a brief time before you find in the expiration that the muscle lets go for a time, to come back again with the inspiratory movement. As a consequence of that, if you keep pressing on it, you find that you do not have that continuous spasm that you will have in an intraperitoneal condition. Further than that, the localized tenderness which you constantly get in the appendiceal conditions is not present in this condition.

The pericarditis must also be kept in mind. It is usually very readily picked up, and only needs to be remembered to isolate it as a probable source.

One other region remains, and that is the region below. Again, it is fairly common to see our medical confreres overlook the question or hernia, the question of scrotal or testinal involvement; the possibility of disturbances in the urinary bladder and prostate are usually not overlooked, although I think as a rule it is true with us that the rectal examination is made more frequently by our surgical colleagues than by the medical men, and very frequently information is picked up by this direct examination which would be readily overlooked if such examination were not made.

Let me bring you back to the question of the intra-abdominal condition. The consideration of the intra-dominal conditions should be accompanied by an accurate history. If the patient is complaining of the right side, epigastric distress or pain, or if there is a swelling there, one naturally should think first that the condition is related to the anatomical factors in the neighborhood, and the only thing you have in that neighborhood in the abdomen is the liver and the gall bladder, with the biliary attachments, and possibly the first part of the duodenum.

The question of whether it is traumatic can be readily eliminated, because if you have a traumatism there, the injury to the liver is readily found by careful examination of that history, but, of course, one finds in the ruptured liver that the patient very rarely comes to examination.

The continued signs located always in a certain definite region rather lead us to the feeling that whatever the pathology may be, it is allied to the anatomical structures in that particular region.

Having exhausted the possibilities of the situation in the right epigastric region, you have still to consider the colon on that side, the cecum, and the appendix, which is a very grave source of pathological condition.

There are two or three factors in the right side that one feels may be permissible to touch upon . The conditions of the so-called acute abdomen, leaving out the traumatic considerations, must relate themselves pretty largely to the inflammatory conditions. The subject of an acute attack of pain in the upper abdomen in that region will probably be simmered down to the possibliity of cholecystic trouble, either inflammatory or due to colic, and the question of duodenal conditions with perforation, possibly, and perhaps obstruction from new growths of various sorts.

It seems to me that this is the point in which the history of the patient is of very great assistance, combined with the examination. If the patient is lying perfectly comfortably, at least quietly instead of comfortably, the probabilities are that the pain of which he is complaining is more likely to be inflammatory than colic. On the other hand, if he is rambling around and restless and thrashing about, it is much more likely to be colicky, due ot obstruction or stone, than inflammatory in character.

The other factor that one feels pretty definitely is always associated with the gall bladder conditions, is vomiting. The vomiting, while it is pretty common in most of the abdominal conditions, is not as persistent with the others as with this, and this also is helpful.

The palpation of the area also is a matter of experience and a matter of training, and can be cultivated to a very large extent.

The lower abdominal conditions on the right side in the male are not likely to be misinterpreted if the complaint of the pain in that region is accompanied by slight or greater fever, with the pulse rate correspondingly increased, and a marked and definite leukocytosis, with rigidity and tenderness on palpation. Then for the most part diagnosis of acute appendicitis is quite easy.

On the other hand, if you have a patient with an appendix over the brim of the pelvis, you may not have any of these signs except possibly the leukocytosis and possibly an elevation of temperature, although you know how frequently you will have temperature not ranging over 99, with a red-hot appendix located in this region. That is a confusing type, and it can be definitely diagnosed only by the assistance of your rectal examination in addition.

Again, from time to time you find an appendix up behind the cecum, and if it happens

to be a long one, and the disease high up in the tip of it, you may not have any low right abdominal pain or distress at all; you may not have any symptoms beyond a more or less subacute distress, until the patient begins to complain of some pain up in the neighborhood of the right costal margin, and there you have a great difficulty in determining whether you have a cholecystic condition or a low grade inflammatory one.

The condition there, I think, is often complicated by the formation of an abscess, which tracks up behind the liver, and you get the subphrenic type. The subphrenic type of abscess is always associated with upper abdominal rigidity and not with lower, and it is associated, too, with an absolutely immobile diaphragm.

Possibly a more difficult one still is the abscess from a gall bladder, or even from a perforated duodenal ulcer, subhepatic instead of subphrenic. But if one keeps constantly in mind the possibility from this standpoint, it is not without reason that one can hope to make an accurate diagnosis.

I would like to emphasize again the statement which was made with regard to diagnosis, that the sifting of these various factors should make it possible to arrive at an accurate conclusion in a very large percentage of cases.. I think it is absolutely essential that every one of us seeing patients should make it a definite rule of practice to make a diagnosis in every case. It may be a provisional diagnosis, it may be an inaccurate diagnosis, but it is helpful in itself as a diagnosis, because the man pins himself down to the belief that the patient has such-and-such signs and they point to such-and-such conditions. He may modify it tomorrow by some additional symptoms or signs that may develop, and it may be possible that he may change it two or three times, but it is in the interests of the individual, of the patient, and I am quite sure it is in the interests of the practice of surgery at large for every man to compel himself to make such a diagnosis.

THE HISTORY AND EXAMINATION OF THE PATIENT FROM THE OPHTHALMOLOGICAL AND OTO-LARYNGOLOGICAL POINT OF VIEW

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It is my purpose in discussing this topic to not only consider briefly some points in the history and examination of patients from the ophthalmological and oto-laryngological standpoint that the general practitioner should know, but what every one of us engaged in the practice of the science and art of medicine should know.

Regardless of the department of medicine and surgery in which we specialize, we are representing the entire medical profession and should have a general knowledge of the whole field, that we may have a reliable working basis for a safe and sane diagnosis and treatment, in case we are thrown upon our own resources. Only in this way can we decide to whom to refer the patient for the special advice and treatment needed. The greatest responsibility rests upon the physician first consulted. Usually this is, or should be, the "family physician", and among the masses this is true. General practice is the biggest specialty in medicine and the general practitioner is not passing, but coming back into his own.

Briefly and concisely as I can, I shall give the method of taking the history and making the examination in the routine of cases that daily consult me. A card is filled out for each patient, containing the name, address, age, sex, race, occupation, and a brief history of the complaint, given either by the patient or attendant, as well as the name of the one referring the case. This card is brought to my consulting room, and I examine it, then when the patient enters, I ask him to give me a description of his complaints, during which recitation I note the facial expression, whether indicative of annoyance, discomfort, pain or anxiety, what time in the day or night the complaint is worse, what will aggravate it, whether the trouble began suddenly and if so, with what symptoms and make a record of any previous attacks.

I note not only the facial expression, condition of the skin and tongue, but also the character of the pulse, and inquire the condition of the excretory organs. In the majority of instances I have a urinalysis made, especially to note any excess of indican in the urine, for this excess is most important from the ophthalmological and oto-laryngological standpoint, suggesting the systemic treatment needed more than any other one thing.

In every case, whether ophthalmological or oto-laryngological, a note is made of the condition seen in the eye, ear, nose, throat and mouth, especially the teeth. As *ophthalmologists* and *oto-laryngologists,* I feel that it is our duty to do more than examine the one organ suspected by the patient as the cause of the disease, because of the intimate anatomical and physiological relation of the eye, ear, nose and throat.

I keep a condensed record, as approved by the American College of Surgeons, for use in general hospital service, of all patients consulting me, except:

1. A copy of the examination made by the one referring the case is kept.

2. No elaborate functional hearing tests are made unless in a case of impaired hearing or

the clinical evidence suggests labyrinthine or vestibular involvement.

3. Refractions with or without a mydriatic unless there is evidence of refractive error or intra-ocular disease.

OPHTHALMOLOGICAL EXAMINATION

The external eye, ocular expression, condition of the border of the lids, and whether or not there is any thickening or blepharitis marginalis. The palpebral conjunctiva is examined, especially the posterior folds. If the patient is over thirty years of age, the ocular tension is taken and recorded. The fundus is examined and if there is any evidence of intra-ocular trouble the pupil is dilated and a thorough examination of the fundi is made.

OTOLOGICAL EXAMINATION

This consists of inspection of the auditory canal and membrani tympani, condition of both being recorded with an especial note of any perforation, discharge, retraction or cicatrix in the latter. If there is profuse discharge more than would be the result of middle ear infection alone, mastoid involvement is suspected and a differential blood count and radiograph is made, or if the size and location of the perforation is not sufficient to give perfect ventilation and drainage a free myringotomy is done. In addition to these a smear is taken and sent to the laboratory. If there is any impairment of hearing the Webber and Rinne tests are made.

PHARYNGO-RHINOLOGICAL EXAMINATION

This begins with the oral cavity, the teeth being inspected and those suspected of being the seat of focal infection, especially crowned teeth, are noted. The appearance and condition of the soft palate, tonsils and supra tonsillar space is recorded with an especial note of the size of the tonsil, whether it be cryptic, phimosed, submerged or adherent to either one or both pillars. Any indication of lithemia or acidosis is also recorded, as well as the condition and appearance of the posterior wall of the pharynx.

RHINOLOGICAL EXAMINATION

Beginning with the anterior nares, inspection is made of the septum, turbinates and attic. If there is a deviation of the septum, note is made of its effect on the side of the deviation as to whether or not ventilation and drainage is blocked and impaired, whether there be purulent or muco-purulent secretion in the middle meati and from whence it comes. The post nares is examined for lymphoid or cicatricial tissue on the pharyngeal vault and its effect on the external orifice of the Eustachian tubes or for any interference in the ventilation and drainage of the nasal passages. Any abnormal condition of the posterior tips of the turbinates is recorded with especial note of muco-purulent secretion and from whence it comes.

TRANS-ILLUMINATION

This begins with inspection of the teeth, with the aid of the diagnostolite, then the maxillary antra are trans-illuminated, both intra and extra orally, concluding with the frontal sinuses. If in the examination of the ear, anything suggestive of a possible mastoid infection is found this process is trans-illuminated.

Usually the laryngological examination is made by the indirect method only, unless there is something seen or suspected which suggests the use of the direct method.

In all suspected cases of laryngeal involvement, the arytenoids, ventricular bands and vocal cords are examined and condition noted. In suspected cases where there is exudate or purulent sputum, smears and cultures are taken and sent to the laboratory for examination.

It is my chief aim to learn the cause of the trouble and whether it originated in the organ suspected, or is a sequelae of disease elsewhere in the body—in other words—is its etiology from within or without the body; is it due to bacteria, bacilli, or cocci?

The three chief sources of infection from an ophthalmological and oto-laryngological standpoint are infection from—first, inhalation, (airborne) second, absorption of septic material from other parts of the body, (focal infection), third, malnutrition, causing intestinal stasis, resulting in both bodily and mental deficiency because of the formation within the gastro-intestinal canal of bacteria giving rise to different forms and severity of toxemia, and whatever the organ of least resistance it will be felt in that organ in various forms.

To recapitulate, focal infection besides giving rise, frequently, to corneal disease, such as phlyctenules, or ulcerations, may give rise to multiple neuritis, uveitis, or gastro-intestinal reflex disturbance, also double vision, diplopia, or may be associated with tabes, multiple sclerosis or general paralysis, or it may also be the result of a peripheral neuritis.

Each case is a law unto itself, and if critically examined no two will be found to be exactly alike, and if similar, their responses to the same treatment will vary.

In cases of ciliary irritation or evidence of irido-cyclitis a radiogram is made of the bony structures above the alveolar process. I have had five cases of irido-cyctitis and two of acute glaucoma where the focus of infection was found to be an unerupted tooth. These cases were reported to the American Academy of

Ophthalmology and Oto-Laryngology, 1922, (See Transactions 1922, pp. 281).

In the ophthalmological examination I place emphasis on the reflex condition of the pupil and also the nature of the headache, the character of the pain and what time in the twenty-four hours it is worse. If there is a sluggish pupil reaction, slight haziness of the cornea, or increased tension it is at once suggestive of glaucoma. Regardless of the severity and location of the pain, the cause and removal of same must be instituted at once, or there will be loss of vision and perhaps the globe will be endangered.

Albuminuric or diabetic retinitis or hazy cloudy vitreous with contraction of the visual field calls at once for careful systemic investigation. Pappillitis or neuro-retinitis suggests at once looking for deeper focal infection, usually found in the post-ethmoid cells, or sphenoid, or if there is a choked disc an intra-cranial cause is suspected.

In the ora-pharyngo-hirnological examination if there is any condition of the teeth which is suspected as a foci of infection a radiogram is made, which includes examination of the bony structures above the teeth. I have had so many cases of unerupted teeth in adults, which gave rise to serious eye trouble that this is always looked for, especially in cases of pain in the eye, ear, or supra-orbital region, not otherwise accounted for.

The point to be emphasized in the nasal examination is the condition of the middle meatus and the nasal attic, if there is evidence of infection or impairment of ventilation and drainage in the anterior or posterior ethmoid cells of the nasal accessory sinuses.

An effort is made to see if the pain is due to retained secretion in the nose or whether it comes from a suppurative condition in the sinuses or ethmoid cells. If the opening of the sinuses are blocked by the swollen turbinates, the pain is due to negative pressure, but on the other hand, if the pressure is due to an accumulation of pus or muco-pus within the cavity which cannot drain through the natural opening the pressure is positive. The prognosis and treatment of these two conditions is so different and mean so much to the patient that careful discrimination and diagnostic acumen should be exercised. In some cases shrinking of the tissues of the middle turbinates and cleansing of the entire nasal cavity by thorough post nasal irrigation, followed by gentle suction is necessary to differentiate between a positive and negative pressure. A drop or two of thick yellow material in the anterior nares coming from the middle meatus does not indicate surgical interference.

CONCLUSIONS

Restrict history and examination records to the minimum consistent with clearness and comprehensiveness, so that another could take up the case with a sufficiency of knowledge from its inception. (Wurdeman).

Every case a bit of original investigation, and its study is like going from one place to another. We are concerned with the most direct route, the starting point being the patient's statement of complaint—but often close observation gives a clew to diagnosis before any statement is made.

"The bulk of the history and examination of every case is to ascertain the presence, rarity, stage, severity, special form and complication of some particular disease, and the good diagnostician, like a keen scented hound, catching the scent he is to follow, sticks to it, not concerning himself with cross trails and the system of both is like following a trail, sometimes getting off, but finding this out and getting back as quickly as possible when the mistake is discovered." (Edward Jackson).

No two cases are exactly alike, and our records of the history and examination are as individual as the case, or the investigator, and "the schedule of both history and examination must be modified to suit the individual case. (de Schweinitz).

THE HISTORY AND EXAMINATION OF THE PATIENT FROM THE PEDIATRIC VIEWPOINT

ISAAC A. ABT, M. D.
CHICAGO, ILL.

Mr. Chairman and Members:

I desire to express my appreciation for the invitation to come before you, and I desire to thank you very sincerely for the honor.

When my good friend, Dr. Warnshuis, asked me to participate in this symposium, I found within myself a considerable degree of conflict. What are the essential points of difference in physical examination between adults and children? How does history taking differ when one approaches a speechless child or a garrulous adult? What organ or organ system should be investigated or dwelt upon? Should the time-honored textbook directions and cautions be reiterated and emphasized.

Perhaps we may pause a moment in order to get our bearings and note the direction in which we are going. In what sense is pediatrics a specialty? Why does pediatrics deserve a special place on this program? No matter what conclusion we reach, I think every one will agree that far-reaching results have been attained in the progress of this branch of medi-

cine. Students are at present better taught in diseases of children than at any previous period of medical instruction. Clinical facilities are more ample and research, investigation and learning in pediatric subjects have advanced knowledge to a high point.

We have added much to the general fund of knowledge in the accurate study of natural and artificial feeding of infants. By vigorous and organized efforts, the infant morbidity and mortality rates have been materially reduced in all civilized communities.

To return to our theme: In former days specialists were surgeons, internists, eye and ear, nose and throat devotees. Today surgery is divided into numerous branches—the urological, gynecological, neurological, otological, and other branches.

In medicine, there are specialists for the heart, lungs, kidneys, brain, spinal cord and nerves, those who treat disturbances of endocrine glands, and those who specialize in diseases of metabolism. So numerous are these, so technical and diversified, that one group barely understands the language of the other.

In contradistinction to this grouping and arrangement, the pediatrician in the children's clinic treat the entire child with all of his organs. It is not true, as has been derisively said, that the child's doctor specializes in soiled diapers and green stools. When the student visits the children's clinic, he sees patients with a variety of disorders, medical and surgical; diseases of the skin and special sense organs; diseases of metabolism, and that vast group of nutritional disturbances peculiar to infancy and childhood depending upon improper food. Here is a varied group of disorders, a field of general practice. In this clinic the student learns to follow the course of acute infectious disease from its inception to its termination, and also to study complications and sequelae. This should not be interpreted to mean that we do not welcome the specialist in the children's clinic; we are in daily need of the surgeon, the otologist and laryngologist, the orthopedist, the urologist, the ophthalmologist, and indeed every specialist who by special knowledge or technique can alleviate suffering or cure disease.

In the narrower sense of the term, the pediatrician may not be a specialist. He deals with many organs, indeed the entire organism of the child. I think no one will deny the advantages of special instructors and departments of pediatrics in medical schools. The pediatric clinic is the invaluable adjunct to such instruction. It is absolutely essential to teach the future doctor the art of treating sick children to recognize their ailments and diseases, and last, but not least, to learn the importance of the greatest gift of modern medicine to mankind, namely, disease prevention.

Numerous topics are considered and taught by the instructor in the clinic. He emphasizes the peculiarities of the child's organism, his reaction to various diseases at different periods of life. The development of the young organism is considered in its physiological and pathological aspect.

The hygiene of the infant and child is investigated and taught and is obviously of the greatest importance. The training of the child, the correction of habits, the interpretation of normality and abnormality, fall to the lot of the pediatrician or the pediatric teacher, and this knowledge transmits to his students.

Whether the pediatrician is to be considered as a specialist in the strict interpretation of the term is quite indifferent. By special training and long experience he becomes especially adapted to recognize disease in infants and children; he acquires knowledge of their disorders; he becomes an adept as a general practitioner in the diagnosis and treatment of diseases of children.

Finkelstein, in a recent publication, speaking of the personal fitness of the children's doctor, says, "One doctor acquires at the outset the correct method and proceeds with unfailing success; the second learns the art after long practice; and the third never acquires the art."

I presume that is true of almost everything in life.

To succeed in the examination and in the treatment of children, one must have a refined quality of human feeling, a keen sympathy, friendship and love for the tiny being, and more than all, he must know the vagaries, the weaknesses and the psychology of mothers. He must understand the elemental pedagogic and psychological procedures, so that he may counsel concerning the training of the child, interpret and advise the mother without causing resentment or unpleasant reaction.

To continue for a moment our discussion as to whether pediatrics is a specialty, the outstanding point is that formerly the management of the diseases of infancy and childhood was a byproduct of the obstetrician and internist. In more recent times when the study of children became a special object of interest, clinicians and laboratory workers were stimulated to make special researches, and the beneficial results are too numerous to be told in a brief record. No other department of medicine has made greater advances, nor has any other department contributed more to the total of human happiness.

If time permits I wish to consider one or two points in the physical examination. As a teacher of medicine, more particularly of pediatrics, for more than thirty years, I frequently have the feeling that as doctors we are wont to

forget our historic consciousness, if such exists. Medical knowledge should not consist of the novelties which have appeared on the printed page the last month or year or decade. Valuable observations in the diagnosis and course of disease as well as in the treatment were known to our ancestors. We have not greatly surpassed the discoveries of Laennec and Skoda in physical methods of auscultation and percussion.

The intern or recent graduate who has received much of his training in the laboratory or in the guinea pig kennels, would sometimes, at least, begin his examination by making a chemical blood test, or a Wassermann reaction, or a spinal puncture test, or determine the metabolic rate, or make an X-ray examination. This point has already been stressed by the previous speakers. It is obvious that this is fallacious. The patient's history should be obtained and then the patient should be examined. The examiner should exercise to the utmost his special sense organs. He should inspect, and the image which he receives should convey a real meaning, or at least should receive an interpretation. He should percuss gently and auscultate attentively. He should receive such information as comes to him from his sense of smell. The old doctors recognized smallpox and typhoid fever by the odor with an unfailing accuracy. Gangrenous diphtheria and noma are revealed by the odor, and an acetone breath may be the first suggestion of diabetic coma.

Lastly, the examiner should touch and feel. Feer, the distinguished professor of Pediatrics at Zurich, writes in his book on diagnosis, that he requires from his young assistants a record of physical findings before an instrument is used or a pin prick wound inflicted. I may add, after one has made his observations, and if circumstances permit, the physician should be allowed a few moments to sit quietly and *think,* because, after all, one should sufficiently compose himself so that he may put all his findings together and interpret them in the light of his knowledge and experience. Diagnosis is a thinking process, not a machine-made process. Most precious of all is good common sense, which very often helps the physician to make a very reasonable diagnosis.

After the preliminary interviews with the mother have terminated, the baby should be presented for inspection. If asleep, the baby should be viewed in its little bed; if awake, the baby should be undressed and held up for inspection. The experienced physician obtains much valuable information by mere inspection. A keratitis, hydrocephalus, rickets, scurvy, idiocy, infantile cerebral palsy, and a great variety of diseases are revealed by simply looking at the patient.

The severity of the illness is frequently recognized, the frequency and character of respiration will often indicate a story and enable one to make a presumptive diagnosis, which is confirmed by more extended physical and laboratory examinations.

Time will not permit a consideration of all methods of examination. The history of auscultation and percussion has been made familiar by the writings of numerous authors. The technique of these methods is amply told in every textbook dealing with the subject.

I wish briefly to refer to one of the most frequently employed and probably the oldest of all methods of physical examination, namely, palpation. In examining historic records, one finds no account of the discovery of this method. Like inspection, it is a natural, almost an instinctive art. One looks, then feels if his curiosity is sufficiently aroused.

The ancient physicians describe the perceptions obtained through the sense of touch. A mass was hard or soft or fluctuating, one learns from Hippocrates. A phlegmon was hot or pulsating. Therefore we conclude that the art of palpating is as old as the race of physicians who have practiced in the civilized world.

In the eighties of the last century, the knowledge of palpation included almost exclusively those conditions which prevailed in tumor diagnosis, and how primitive these diagnostic methods were may be realized from an expression quoted from Billroth, who said that whenever he opened the abdomen for an acute condition he was happy if he met an abdominal affection instead of a pneumonia or thoracic afection—a condition which has already been emphasized by the previous speakers.

The same thought is expressed by a Russian surgeon, Slifosowski. When asked to which organ a tumor belonged, he replied, "It belongs to the abdomen."

Later on, the internists awakened to the desirability of making pre-operative diagnoses, and they attempted to apply palpatory diagnosis in the recognition of abdominal tumors. Among those who made pioneer studies in palpation were Rosenheim and Minkowski, though it should be said that most internists made their daignosis of intra-abdominal conditions after exploratory laparotomy had been performed.

Surgeons as a rule were in the same position as the internists with reference to abdominal diagnosis. The first one who attempted to systematize and organize knowledge in this direction was a German surgeon, B. Pagenstecher. He described the palpatory peculiarities of tumors of various abdominal organs. He also was the first to inflate the stomach and intestines in order to localize tumors.

Up to this time, no one had perfected palpatory methods in diagnosis in abdominal conditions of the alimentary tract other than the method used for detection of tumors.

Glenard and Obrastzow were the first who attempted examination of the colon by palpatory methods, and Hausman was the first to elaborate them for practical use. According to Hausman, the cecum, the appendix, the pylorus, the greater curvature, might be felt under certain circumstances. If your reaction is the same as mine when I first encountered these writings, you will say under your breath, "I don't believe it." But wait. He claims to have done this, to have palpated these various abdominal viscera.

About this time Glenard recognized for the first time that nephroptosis was a part of general visceroptosis. He also noted that the colon moved with respiration and could be passively pushed upwards and downwards, but not laterally. He also was able to show that the transverse colon could be differentiated from other organs in the abdominal cavity, such as the stomach, pancreas, or intestines.

Glenard's observations were not taken seriously, or at least were not confirmed by his contemporaries.

Obrastzow, however, worked independently of Glenard, and confirmed and amplified his findings. Obrastzow succeeded in palpating the normal colon in a considerable number of cases. He could feel the transverse colon in 33 per cent of cases, the cecum in 53 per cent, and the sigmoid in 40 per cent. Obrastzow's conclusions were not generally accepted. Most of the textbooks on internal diagnosis do not mention his method.

Hausman, in discussing the findings of Glenard and Obrastzow, regrets that so few have been willing to accept these methods in routine abdominal examinations. He thinks that physicians would be more ready to receive a new laboratory method than one that could be so easily applied as palpation and particularly abdominal palpation.

I have no doubt that the ability to palpate well is to a large extent an individual endowment. The sense of touch and the muscle sense will explain the genius of the virtuoso, who has shown in his early childhood inherited ability at the piano or with the violin or other musical instrument.

This same refined muscle sense probably explains the talent for drawing, painting, sculpturing, or indeed, anything which requires touch or muscular movement. On the other hand, the sense of touch and the dextrous use of small muscles may be acquired, notably, the blind learn to read by using raised letters. There are numerous instances where children of mediocre talent are taught to paint, draw, and mould in clay. It seems, therefore, that the ability to palpate depends to a degree upon the natural dexterity and the inherited delicacy of touch and muscle sense. On the other hand, the art of palpation may be acquired by nearly every one by diligent and thoughtful practice.

Obrastzow and Hausman have formulated some general directions. It is important that the examiner should be in a comfortable position. The familiar advice appears in every text that the examiner's hands should be warm. The patient should be in the recumbent position. Hausman advises that the head be pressed deeply into the pillows. The legs should be outstretched. It is of no advantage, the best authorities say, to have the thighs flexed on the abdomen. The difficulty in abdominal palpation is increased by the interference of the drawn up thighs, even if in some instances there is complete relaxation of the abdominal wall.

Hausman has suggested the method of gliding and deep palpation. By adopting this procedure, he claims he is able to palpate the large intestine, and also to recognize portions of the stomach. In certain instances he can feel the appendix.

The most important factor is overcoming the resistance offered by the abdominal wall. Great force should not be used. Indeed, forceful efforts do harm and affect the procedure adversely, because they cause muscular contraction and increased resistance.

The utmost attention should be given to the respiratory phase. During inspiration, particularly in abdominal breathing, the muscles contract and the resistance increases. The important point is that in performing deep palpation, the fingers should come to complete rest during inspiration. At the moment when inspiration ceases and expiration begins, the maximal relaxation occurs. During this period of relaxation, the fingers may be pushed deeply into the abdominal cavity, though the manipulation should not be too energetic nor too rapid. It should be stated, however, that the maximal resistance may vary in some individuals. In rare instances it may occur during the inspiratory phase. In every case, one should find the relaxing period, and this phase should be used at the opportune time or moment.

Hausman gives the following directions for palpating the greater curvature of the stomach which may serve as an example of his technique. He introduces one or more fingers into the epigastric region, attempting to penetrate as deeply as the presenting surface of the spinal column. Then he makes sliding movements from above downwards, that is, in a transverse direction to the greater curvature. These sliding movements are made in rapid succession in both directions, that is, from above downwards and from below upwards. They must be continued until the fingers are felt to sweep over the greater curvature. The deep palpation should be conducted during the expiratory phase. With a similar technique, Hausman claims to have palpated the pylorus in adults,

also the swollen or hypertrophied pylorus in children.

Several cardinal points are stated which express Hausman's technique of palpation. The manipulation should be conducted first, in the right direction; the long axis should intersect at right angles the area of the digestive tube to be palpated; second, in the right place, that is where the suspected region is located; third, at the proper depth; fourth, at the right time, that is, during expiration.

Eliciting tenderness is an important factor in palpation. There has been much discussion as to whether the abdominal pain and tenderness are produced by inflammation in the deep lying organs or whether they are purely cutaneous according to Head.

Deep palpation is usually impossible during an acute attack of appendicitis or any acute infection of the abdominal organs. In some cases of acute appendicitis, deep palpation may be performed if only a slight amount of force is used, and if one proceeds cautiously without producing great pain.

In the so-called chronic appendicitis, palpation has more value as a diagnostic measure. Hausman maintains that it is sometimes possible to feel the diseased or enlarged appendix, and also to elicit deep-seated tenderness which may be most marked in the ileocecal region, though occasionally the pain is felt in other places, such as the hepatic region, the epigastrium, the left side of the abdomen, or even in the back.

It need hardly be mentioned that palpation at first should include the superficial portions of the abdomen, and finally the deeper portions should be explored.

Distention of the abdominal cavity with gas or fluid, the accumulation of food in the stomach, the pressure of fecal masses in the large intestines, or the distention of the bladder with urine are sufficient at times to defeat the most expert in palpation.

In nervous adults or in children in whom the slightest touch causes, reflexly, contraction of the abdominal muscles, Obrastzow recommends that the examiner should press on the side opposite the one to be examined. This procedure causes the contraction of two areas; the site which is to be examined tends to become relaxed somewhat and enables the examiner to press more deeply into the abdomen. As a matter of fact, this manipulation does not always succeed.

It is sometimes difficult to differentiate voluntary contraction of the abdomen from contraction of the muscle due to intra-abdominal inflammation. In the latter case, the muscles stand guard against the production of pain. Finkelstein recommends that the volar surface of the middle finger be placed on the abdomen in various regions and, with the middle finger of the other hand, pressure be made over the nail of the palpating digit. Pressure should occur at the moment of expiration, and light vibratory thrusts should be made. In this way the various regions of the abdomen are investigated. In those instances where the muscles are standing guard, no perceptible impression is made on the rigidity. Where the contraction is due to fear or nervousness, the muscles yield on moderate pressure.

It may be necessary in different cases to anesthetize children to palpate effectually. Palpation by rectum in children as well as in adults may yield valuable information, particularly if the lesion is located in the pelvic area.

Gubergritz suggests that the patient's position be changed, especially in difficult cases. For example, if there be considerable ascites and the liver is to be felt, the patient should be turned on the left side. In this position one frequently succeeds. Israel suggests that if the left kidney is to be palpated, the patient should be placed on the right side. He says that the kidneys approach the midline and descend slightly and may be palpated in this position. Similarly the spleen may be felt if the patient is lying on the right side.

Gubergritz found that if he wished to palpate the right hypogastric region, he met with considerable success if he placed the patient on his left side. In this way he was able to feel the ileum, spleen and descending colon in cases where he had previously failed. He thinks that not only the ileum, cecum, ascending colon and appendix may be felt in this left lateral position, but also the sigmoid and descending colon, under some circumstances. He also claims that patients suffering from chronic appendicitis give no evidence of tenderness when examined in the dorsal recumbent position, but if the same patient is examined in the left lateral position, pain may be elicited to the right of the right rectus muscle.

Rosenstein in 1922 also found that appendiceal tenderness was more easily elicited in patients who were placed on the left side.

Gubergritz also reports the examination of patients in the intervals between attacks of biliary colic. Those who were examined in the dorsal recumbent posture showed no tenderness, while in those who were examined in the left lateral position, tenderness was elicited in the liver in the majority of cases.

Palpation of the abdominal organs is an art that should be learned and taught. One who has a skilfull hand and who reflects and thinks about his findings will make the most accurate diagnoses.

THE HISTORY AND EXAMINATION OF THE PATIENT FROM THE PUBLIC HEALTH VIEWPOINT

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The preceding speakers have all emphasized the history and examination of the patient from the standpoint of his own personal health; in the public health discussion of this topic the relationship of the individual to the health of the community is to be emphasized. When an individual comes to see a physician it is usually because of some ailment, the cure of which, however, is only one of the duties of the physician. As is becoming more and more recognized, he has the responsibility of keeping his patient free from disease and of protecting the health of the community at large.

Keeping the well baby well has for twenty years been the slogan of the pediatrician. The prenatal clinic, the infant welfare station, the pre-school clinic, and school examinations were started to prevent diseases that in their end stages we could not cure. The best example of this is the practical elimination of the peak of infant mortality during the months of July and August.

The history of the patient from the public health viewpoint is to a great extent an epidemiologic study of the source of the infection or intoxication. Depending on the type of disease, the history may be concerned with individuals, such as is the case in the acute infectious fevers, ringworm, lice, and scabies; again the milk supply and other foods deserve attention, as in scarlet fever, diphtheria, septic sore throat, tuberculosis, or typhoid; in typhoid and dysentery, the water used for drinking purposes should be investigated; severe throat and ear infections may be spread through crowded beaches and improperly controlled swimming pools; pellagra, beri-beri, scurvy, rachitis, and school anemia may necessitate investigation of the dietary regime of institutions; trades will enter into the history of cases of lead and analine poisoning and silicosis.

The co-operation of the physician with the health department in all cases of an infectious nature is as much his duty as is the relief of the suffering. It is of necessity impossible for the busy practitioner to make complete epidemiologic studies of each case, but he can obtain the information at the earliest possible moment and by co-operation can prevent the spread of infection beyond the secondary cases. The history of exposure is of even more vital importance when one remembers that certain diseases can be prevented even after exposure. Smallpox, diphtheria, measles, possibly scarlet fever and pertussia may be prevented by vaccination or serum treatment. The prevention of measles in infants and in young children with tuberculosis by convalescent serum has been a great factor in the reduction of the mortality from measles. Our concern is not so much with the patient as it is with those individuals who have come in contact with him. The history acquired from the patient will be a factor in preventing the spread of the disease.

The examination of the patient may be undertaken from two points of view: during an epidemic mass examination may be necessary; secondly, the well child and adult should be examined for signs of disease before symptoms are sufficiently evident to warrant his seeking medical aid.

In mass examinations we are usually dealing with rather simple examinations for a single disease, for example, direct inspection and obtaining cultures from the nose and throat in diphtheria, and the inspection for scabies, lice, or ringworm in schools where the infections are present. The recent use of the precipitin reaction advocated by Rosenow in infantile paralysis is a similar attempt. In the infant wards of hospitals search for gonococci must often be made to isolate carriers and prevent further spread of the disease. Mass examinations may be readily carried out by physicians with relatively little special training.

The examination of the healthy child or adult is a very much more difficult procedure and requires a different attitude of mind than that of the practitioner treating disease. I can never forget the physician who was conducting one of the early infant welfare stations in Chicago and who, after three months, was still surprised when a mother told him her baby was not sick. For about thirty years periodic examination of the normal infant and child have been carried on in Europe and this country, with the result that certain diseases, cholera infantum in particular, have practically disappeared in the epidemic form. Atrophy or malnutrition of the infant, thanks to these periodic examinations, is a rarity instead of the constant result of improper care. The search for defects and foci of infection before they are manifest symptomatically is, to my mind, often a more difficult medical problem than the diagnosis of an evident disease.

First of all, a very definite knowledge of what is normal and ability to recognize slight deviations from the normal is required. The early recognition of rickets, scurvy, and feeding disturbances, the danger of infected tonsils and adenoids, the bad effects of high arched narrow palates on nasal breathing, the effects of dental caries, the many postural defects, flat feet, improper habits of eating, sleeping, and playing are often found by careful examination and by thorough history taking in the apparently normal child.

The same would be true of the adult if he were presenting himself for examination at regular intervals. The life insurance companies have realized the importance of periodic examinations and give them free of charge to their policy holders.

The so-called public health attitude of mind is one that the medical profession as a whole must develop to a much greater extent. Occasionally one still hears that this will curtail the work of the physician. It is self-evident that it will increase his work, provided he is equipped to do it. Just as prevention of disease is the major part of the work of the pediatrician, so will prevention play an increasing role in the work of the general practitioner.

CYSTS OF THE PANCREAS WITH REPORT OF A CASE

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Cysts of the pancreas are rather rare affections. When we think of the many number of operations performed upon the abdominal viscera every day we begin to realize how comparatively few cases of pancreatic cysts are encountered. Judd has found only forty-one cases in the records of the Mayo Clinic. Oser was able to collect records of 132 cases and in addition to this, Willis adds fifty-five cases in his search of the literature. Korte, who has done extensive research work along this line, has collected one hundred and twenty-one instances.

Having recently encountered a rather interesting case of pancreatic cyst, I was prompted to look up the literature on the subject. In view of the rarity of this affection and because there is still much to be learned about cysts of the pancreas, I will review in brief what I have gleaned from the literature and incidentally report in detail a case which came under my observation.

There are several types of pancreatic cysts. By far the most frequent is the retention cyst, originating in the substance of the gland. This is formed when an obstruction to the outflow of the pancreatic secretion causes a retention of fluid with the consequent dilation of the ducts. This may be caused by pressure from pancreatis with stricture of the duct, by calculi in the duct, by pressure from without as in gall stones, by tumors of the neighboring organs, or by a combination of compression from without and obstruction within. The most frequent cause is chronic interstitial pancreatitis. In all cases of pancreatic cyst, there is present an interstital pancreatitis. Whether or not this is the cause or effect, it is difficult to state. It is pretty generally recognized now that gall bladder diseases and pancreatic cysts are closely related. In the forty-one cases collected by Judd, the association of gall bladder disease was present in seventeen and he has cured chronic pancreatitis by drainage of the gall bladder. Ballin reports a case of pancreatic cyst following cholecystectomy for gangrenous gall bladder. Ballin says in "disease of the gall bladder and its relation to the pancreas there are two factors; viz., stasis and infection. We know that stasis is a potential factor in gall bladder disease and is of great pathologic significance." Ballin states that "patients with pancreatic and biliary fistula without actual obstruction in the ducts have been cured by eating every two hours. This brings about a practically continuous flow of bile into the duodenum, and hence allows of no retention." Archibald has produced pancreatitis by allowing bile to flow intermittently into the pancreas. Thus we see that by the tendency it has of producing a chronic pancreatitis, the gall bladder stasis and infection indirectly has some etiological significance.

A few pancreatic cysts are of the proliferated variety; i.e., cyst-adenomata. They form as do these new growths of the thyroids or ovary. Primary carcinoma is rare, but when found it is secondary to these cyst-adenomata.

There have been a few cases of congenital cysts reported which are usually accompanied by congenital cysts in other organs—the so-called congenital cystic disease.

Hydated cysts are rare. Two are caused by the taenia echinococcus and are prevalent in countries where people live in close contact with dogs, as in Iceland and in many sections of South America. Manuel Albo, of Monte, video, has reported several interesting cases of this type.

Judd reports a dermoid cyst of the pancreas that contained hair and one tooth.

Pseudo-cysts are next in frequency to retention cysts. They are those which are in relation to the pancreas, but are not necessarily of pancreatic origin. They are due as a rule to an injury of the pancreas or its capsule, resulting in a hemorrhage or the leakage of pancreatic fluid into the lesser peritoneal cavity. It is almost impossible in some cases to distinguish these from true cysts. It was thought at one time that an examination of the contents would differentiate them, but this is of relatively little value in establishing a diagnosis. Opie says:

> The presence in the cystic contents of one or more enzymes resembling those of the pancreas was formerly believed to give proof that a cyst had its origin in the pancreas. Not infrequently one or perhaps all of these enzymes are absent in the contents of the pancreatic cysts, whereas fat splitting diastatic or proteolytic enzymes are found in fluids not derived from the pancreas.

Cysts of the pancreas do not produce a definite syndrome and are difficult to diagnose. The early symptoms are trivial. Patients complain of fullness and distress after eating, pain varies and is of no diagnostic value, nausea and vomiting occasionally occur but are not common. Frequently there is considerable loss of weight. There is moderate anemia, but nothing characteristic about the blood picture. The symptoms are generally due to pressure on the neighboring organs, as the stomach, the diaphragm, bile duct, etc. Jaundice is rare. Glycosuria due to pancreatitis is sometimes present. On physical examination we commonly find, generally to the left of the median line, a tumor which is spherical in shape, smooth, and tense to the touch, usually fixed unless attached to the tail of the pancreas when it is slightly movable. They vary in size, and in neglected cases may occupy the whole abdominal cavity even extending into the pelvis. They have been mistaken for ovarian cysts the true nature being discovered at operation. In making a diagnosis flouroscopic and X-ray pictures are a great aid.

In regard to treatment excision of the cyst would seem the most desirable, but on account of the anatomical situation over the abdominal aorta, vena cava, and other vital structures, and with the accompanying adhesions to other organs, this is only feasible in rare and selected cases. The operation of choice is aspiration and drainage. This almost always leads to a permanent cure and has a low mortality. The technic of this operation will be described in the case report.

The case that I have to report has some very interesting features. While time will not allow me to go into detail in the analysis of the various symptoms, I will attempt to give a sufficiently comprehensive report with the hope that I may contribute something that may stimulate someone more scientifically equipped than I to carry on such research that will add to our knowledge of this rare malady. In view of the dearth and obscurity of early symptoms in these cases, I feel that anything we encounter that may throw a gleam of light will be worth while if it enables us to detect the pathological condition present before it produces such a profound effect on the general system. The recitation of the symptoms found in every case will at least make us bear in mind the possibility of a cyst of the pancreas in our routine examination of the abdomen.

CASE REPORT

M. S.—Female, widow, aged 59 years, admitted to the hospital May 31, 1925—discharged July 1, 1925.

History—Has had six children, all full term and all deliveries normal, no miscarriages. Menstral history negative. Normal menapause about ten years ago; no bleeding since.

About five years ago had a severe attack of pain in the epigastrium. Pain came on suddenly and was accompanied by slight fever, nausea, vomiting, and was followed by distinct jaundice, which led to the diagnosis of gall stone colic. This attack lasted for several days. Since this attack patient has had several others that were not so severe and were not followed by such marked jaundice. Ever since the first attack patient has noticed a feeling of heaviness and pressure in the epigastrium, which has become more and more noticeable, and at the present time interferes with respiration. About seven months ago patient had a badly infected finger and at this time the doctor in attendance found sugar in the urine. Patient states that she then noticed that she was thirsty most of the time and that although she ate more than usual she was losing weight. She had some slight pruritis at this time. She was put on a slightly restricted diet and the symptoms slightly cleared up for a time, though she continued to lose weight. About three weeks before admission to the hospital she sought treatment on account of dryness of the tongue, and examination disclosed a mass in the epigastrium and a marked reaction for sugar in the urine. Patient stated that she was hungry most of the time, drank large quantities of water, felt very weak most of the time, complained of "trembly feeling", slight dimness of vision, a dry mouth and constipation. During the last seven months she has lost thirty-eight pounds.

Physical Examination—Woman apparently about 65 years old, considerably under nourished, skin dry, hair dry and harsh, pupils equal, and active, slight icteroid tinge of conjunctiva, marked arcus senilis. Artificial teeth only; tongue slightly swollen, very dry, deeply red and with slight white coating at back.

Throat—Negative. Neck—negative. No enlargement of the cervical glands.

Chest—Lungs, clear; no enlargement of heart; soft blowing systolic murmur heard at apex, not transmitted.

Abdomen—Rather marked fullness in epigastrium. On palpation a large, somewhat irregular mass extending from high up under the left costal margin across the upper part of the abdomen to about the right nipple line. The lower limit of the mass is about one finger breadth above the umbilicus; the lower border of the mass somewhat resembles the greater curvature of the stomach. The tumor feels hard, no fluctuation can be made out, feels very much like a carcinoma of the stomach would feel but is not movable.

Extremities—Negative, no oedema.

Reflexes—Normal, both superficial and deep.

Urinalysis—Color, pale amber, Sp. Gr. 1036, Albumin 1 plus; Sugar 3 3/5 per cent, Glucose output in twenty-four hours 38.8 Grm. An occasional hyaline cast and finally granular casts, a few pus cells.

Blood Examination—Reds, 4,560,000; whites, 6,600.

Differential Poly.—67 per cent, large mono. 4 per cent, small lymph. 24 per cent.

Transitional—2 per cent; Barophiles—2 per cent; Eosinophiles—1 per cent.

X-Ray Plates—Stomach after barium meal—Immediate shows contraction across the stomach; five hours afterwards, shows stomach completely empty.

Flouroscopic Examination—Shows filling of the cardiac end of the stomach after which barium can be seen trickling past the obstruction into the pyloric end.

Treatment and Notes—June 2, 1925, patient put at rest in bed and given ordinary diet for twenty-four hours containing 38.8 grm. glucose..

June 3, Patient excreted 13.4 gm. on diet containing 50 gm. glucose.

June 4, patient excreted 11.5 gm. on diet containing 50 gm. glucose.

June 5, patient excreted 2.8 per cent on diet containing 50 gm. glucose.

June 6, patient excreted 2.6 gm. on diet containing 50 gm. glucose.

June 7, patient excreted only faint trace.

June 9, patient sugar free.

June 12, diet increased to 64 gm. glucose—still sugar free.

June 16, urine still sugar free. Prepared for operation by giving 50 gm. glucose by mouth followed immediately by 15 units of insulin by hypodermic and morphia sulphate gr. ¼.

Operation under local anaesthesia—A left rectus incision was made over the most prominent part of the tumor, the rectus muscle was retracted to the left, the peritoneum opened and the stomach presented. The gastro-colic omentum was torn through when a large, smooth, tense walled tumor was felt that seemed to spring from the body of the pancreas. A Luer syringe with a long needle was inserted and fluid withdrawn, demonstrating the cystic nature of the neoplasm. The tumor was packed off from the abdominal cavity with moist pads. Three pints of dark brown fluid were withdrawn through the trocar, an incision was made in the cyst wall, the cavity was swabbed out, the cyst wall was sutured to the parietal peritoneum, a 3/8 inch drainage tube closed in a double purse-string suture and cyst drained through stab wound as in gall bladder drainage. Abdominal wound, closed in layers without drainage. Vasaline gauze, sterilized, placed over and around the wound to protect the skin from a possible leakage of pancreatic fluid. The patient had no shock following operation and was able to take liquids immediately returning to her bed. The day following her operation there was present a moderate amount of sugar, with a sugar free urine on the third day, when she was taking 67.6 gm. glucose. At the end of the first week she was given 82.6 gm. glucose and at the time of discharge from the hospital, five days later, it was increased to 97 gm. her urine still remaining sugar free. The diet is still being gradually increased. We have not yet reached the limit of the patient's tolerance. The diet will be increased gradually and frequent examinations of urine made. The sutures were removed on the seventh day, the wound being entirely healed and clean. On the fourteenth day as drainage had ceased the tube was removed, and in two days the stab wound was healed. The patient at this time was eating and sleeping well and expressed herself as feeling stronger and better than she had in several years.

The case is Interesting from the fact that her symptoms were so vague that it was almost impossible to get a lead to diagnosis, until during the course of examination a mass was felt in the upper abdomen, the presence of which she herself did not even suspect. We are also struck with what accuracy the X-ray and flouroscopic findings checked up with our findings on operation. Another feature that is worthy of mention is the rapidity with which her tolerance to carbohydrates has changed since the operation. This is evidently one of those cysts of the pancreas accompanied by a true diabetes. The rapid subsidence of the drainage with perfect healing is rather unusual.

A NEW TREATMENT FOR ASTHMA AND THE RELATED ANAPHYLACTIC DISEASES*

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ANAPHYLAXIS

In order to understand the present conception of the etiology of asthma, it is necessary to recall some established facts concerning the phenomenon of anaphylaxis. When a small dose of any foreign protein is injected into a guinea-pig and 10 to 14 days later a second and about 100 times more concentrated injection with the same protein is made, the animal instantly develops symptoms of distress, as dyspnea, cyanosis, jerking of the limbs, spasms of the thoracic musculature, followed by paresis and death. To this phenomenon Richet (1) applied the term anaphylaxis, or supersensitiveness. Anaphylaxis can be avoided in desensitizing the animal against the respective proteins, i.e., by injecting repeatedly small amounts of increasing doses of the protein. But even without desensitization, some animals do not present the anaphylactic reaction described, due to the fact that some species and families are not susceptible to certain proteins. (Lewis and Loomis, 2). This inconstancy of result has been a great obstacle in experimenting on this subject.

A great many investigators have attempted to explain the mechanism of anaphylaxis, accomplishing, however, only limited results. It is believed, (Richet, Besredka, Nicolls, Pirquet, 3), that after the first injection a toxic substance, called sensibilisin, albuminolysin, allergin—some authors incorrectly apply the term antigent—is formed, which produces either a protective reaction, (immunity), or an injurious one, (anaphylaxis), depending on various factors which cannot be explained at the present time. (Weil, 4). The organ which has been generally held responsible for the production of this substance is the liver. Recent investigations, however, (Hektoen, 5), brought forth evidence that the spleen and the bone marrow (Motahashi, 6) are intimately concerned in the process of antibody formation. In view of the outcome of these investigations, some (Wells, 7), are inclined to believe that the cells of the reticulo-endothelial system,

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which are distributed in the liver, the spleen, bone marrow, and the lymphatic tissue, are the location where the anaphylactic substance is formed. Petersen (8) supported this conception in showing that blocking of the reticuloendothelial system, by means of intravenous injection of india ink, protects the animal from anaphylactic shock.

ANAPHYLAXIS IN THE HUMAN

If we apply the phenomenon of anaphylaxis to the pathology of the human organism, we see that the immediate reaction to the second injection of foreign protein described above corresponds very closely to a disease first reported by Pirquet (9), called serum sickness. This disease manifests itself by tenderness at the site of the injection, urticaria, erythematous or morbilliform eruptions, pyrexia, swelling of joints, edema, slight albuminuria, distension of the lungs resembling emphysema, convulsions, and even death. In differentiation from this artificially produced allergy, there is a group of diseases which has been quite definitely found to be of allergic character. This group embraces bronchial asthma, hay fever, urticaria, angioneurotic edema, eczema, vasomotor-rhinitis, vasomotor conjunctivitis, and some kinds of gastro-intestinal and bladder disturbances which are attributed to edematous swelling of the mucosa of the intestinal tract and the bladder. In spite of the great progress in the understanding of their pathogenesis, we are still far from having a satisfactory insight into their mechanism. We do know that the eliciting substances for these conditions, the sensitizing proteins, are constituents of certain foods, bacteria, (including tubercle; bacillus, Stuhl, 10), animal mal and human emanations, and pollens. However, non-protein substances, such as quinine, quinindine ipcachuana, antipyrin, potassium iodide, and even physical agents, as heat, humidity and the changes of barometric pressure are involved in the causation of the anaphylactic diseases. According to Duke (11) the above named physical agents may produce the breaking up of body proteins and therefore indirectly cause anaphylaxis.

An asthmatic attack is believed to be brought about in the following manner. A lack of antibody to the proteins of either one or a group of the above named agents causes a change in the vago-sympathic equilibrium (Galup, 12), resulting in spasm of the bronchial musculature, edematous swelling, an "urticaria", of the mucous membranes of the alveoli, (Baagoe 13), and secondary development of the signs of emphysema.

Two features characterize the asthmatic condition, first, a change in the ion arrangements of the body (Pottenger, 14). A deposition of calcium salts takes place in the lung alveoli. Clinically this is featured by the finding of Charcot Leyden crystals, which consist of calcium phosphate and calcium carbonate, as pointed out by Storm van Leuven and Nyik (15). In the blood the calcium and magnesium salts are, concomitantly with this phenomenon, diminished in anaphylaxis. (Azzi, 16).

The other characteristic sign of the asthmatic state is eosinophilia in the blood, and an accumulation of eosinophile cells in the sputum. The very interesting publication of Mayr and Moncorps (17) has thrown new light on the important role taken by the spleen in the origin of the eosinophile cells. These authors conclude that diminished function of the spleen increases the production of eosinophile cells, whereas disapearance of these cells is brought about by hyperfunction of the spleen. The bearing of this fact on our conception of anaphylaxis is evident. It also should be mentioned that the diminished coagulability of the blood, a symptom described in anaphylaxis by Kraus and Biedl (18), points to the spleen as a causative factor in asthma.

THERAPY OF ASTHMA

According to the described mechanism of an asthmatic attack, the principles involved in treatment are (1) desensitization, (2) removal of the sensitizing substance, (3) re-establishment of the vago-sympathico equilibrium.

1. Desensitizing is facilitated by first determining the sensitizing substance through skin tests, and then injecting small amounts of the causative proteins in increasing doses. This is successfully accomplished in hay fever with the proteins of the pollen group, but for asthma the application of this principle has not yet fulfilled the hopes of clinicians. Quite recently Storm-van Leuven (19) reported on experiments with desensitization, using injections from extracts of the condensed air of Rotterdam and other Dutch cities. This work is still in progress. In a large percentage of cases, tuberculin treatment is effective, since a great many asthma patients are primarily afflicted with tuberculosis. (Storm van Leuven, 20). This treatment can therefore be considered as desensitization against tuberculo-toxins. Vaccine treatment has decreased in popularity among clinicians. (Rowe, 21). Its effect seems to be limited to the cases of pure bacterial anaphylaxis. It is also believed that the non-specific proteins, as pepton milk and others, have little effect in desensitizing.

2. As to removal of the sensitizing agent, consideration has been given to dietetic instructions, discarding the skin-positive foods from the diet, removal of offending articles, such as mattresses, feather pillows, woolen clothing, prevention of contact with certain animals, and

with human beings to whose emanation the individual may be sensitive. To this latter method particular attention has been given by English clinicians. Where bacterial infection is responsible for asthma, removal of the sensitizing bacteria by eradiation of the focal infection, especially in nose, sinuses, and throat is of great importance. With these methods Rowe recently reports approximately 90 per cent cures among 234 cases.

3. In order to recognize the vago-sympathico equilibrium adrenalin injections, often combined with atrophin and intravenous calcium chloride injections, are of great benefit during the attacks. These measures are merely symptomatic. In order to relieve the bronchial spasm Kummel (22) recently advised resection of the cervical sympathetic ganglion. The results with this method are still doubtful. The value of iodides, an entirely empirical remedy, is very questionable.

Among all these more or less problematic means in the treatment of anaphylaxis, desensitization seems to be the one which approaches most closely the etiology of this disease. Theoretically, the ideal treatment would be a method by which the body would be enabled to form actively enough desensitizing substance to prevent the anaphylactic reaction. This is the guiding idea which the writer has in view in carrying out the studies on X-raying the spleen in the anaphylactic diseases.

IRRADIATION OF THE SPLEEN

If we believe in a lack of antibody to the sensitizing substance as the cause of asthma, a theory for the support of which there is increasing evidence among serious investigators, and if we consider the diminished function of the reticulo-endopheliol apparatus as the cause of this lack of antibody, we can expect results by stimulating the function of the spleen. Such a stimulation is possible by giving small X-ray doses. There are authors (Schilling, Klewitz. 23) who successfully irradiated the bronchial glands for relief from asthma. In the opinion of Groedel (24) the results obtained by this method are possibly due to divergence of secondary rays to other parts of the body, especially spleen and liver. In a further perusal of the literature, it has been found that in 1920 Drey and Lossen (25) reported the accidental cure of an asthma patient after irradiation of the spleen, which had been performed on account of a leucemic condition. Groedel (24), who took up this treatment, reports that among 71 cases treated, all but 15 were cured.

The question comes up, how much damage can be done to the organism by giving small X-ray doses to the spleen. Let us think of the disorders which can arise from a disturbance of the hemopaietic function of the spleen. We have to consider that the neighboring organs, especially the small intestines, are very sensitive to X-rays.

In recent years irradiation of the spleen has been widely used in leucemia and in the hemorrhagic diseases. As a means to control hemorrhages it has already been taken over into the armamentorium of the general practitioner, in some countries. After a careful search of the lecturer the writer was unable to find any case on record which was badly influenced by this treatment. Among the animal experiments done in order to determine the possible in effects of X-rays over the spleen, the writer refers to the work of Harbinson (26), who failed to find any pathology in post mortem and clinical studies on rabbits which received doses of X-ray many times larger than administered in the following studies on humans.

RESULTS

Nine children with bronchial asthma and one child with urticaria were submitted to a very careful history and physical examination. Sputum examinations for Charcot crystals, eosinophile cells and Curschman spirals, X-ray examinations, protein skin tests, blood pictures for eosinophilia, in some cases blood calcium determinations, have been made in order to substantiate the diagnosis. Most of these tests were checked carefully after the treatment. If a child was seen during an acute attack, pharmaco-dynamic tests have been performed by injecting adrenalin and observing its value in relieving the attack. According to the degree of relief by adrenalin, the marks +, ++ and +++ respectively, are used in the chart -1-. No other treatments have been given besides the application of the X-ray. Details on the X-ray technic applied are given elsewhere (Waldbott, 27).

Among the ten patients treated, six had no more attacks after the X-ray treatment. All but two were submitted to only one exposure. Patient 2 had two more seizures after the first treatment, but was relieved completely after the third exposure. Child 3, has not been benefitted by the treatment. A repeated X-ray examination revealed hyperplasia of the thymus gland. This condition was cured afterwards by X-rays over the thymus. Most of the children were seen quite recently for re-examination, except patients 8 and 9, who could not be located.

If we therefore exclude from our series patient 3, with the thymus hyperplasia, and patients 8 and 9, who did not return, we can say that among the seven properly treated children all but two have been entirely cured during the time of observation. One of these two patients

Case No.	Age	Sex	Anaphylactic History	Asthma for	Attacks Frequency	Skin Tests Positive	Eosinophilia	Dermatographismus	Response to Adrenalin	Associated Findings	Last Treatment	Number of Exposures	Result	Comment
1. H.D.	6½	M	Urticaria 3 times, Vasomotor Rhinitis	4 years	Once in 1-2 weeks	Milk Casein Wheat Egg	4%	+	+	Some carious teeth	Sept. 25, 1924.	1	No asthma since last treatment	
2. J.A.	6	M	Frequent Vomiting, especially when eating vegetables	1 year	1-2 a week	Cabbage Carrots Veal Chicken	9%	++	++	Pyorrhea; carious teeth	Nov. 12, 1924.	4	No asthma since last treatment	Skin reactions negative after 4th exposure
3. M.T.	2½	M	Eczema when 4 Months old	1½ years	Once every 2n or 3d day	Neg.	8%	Neg.	None	Slight thymus enlargement	Jan. 15, 1925.	1	No relief until treated over thymus	
4. T.F.	1½	M	Eczema when 3 Months old. Frequently Urticaria	1 year	1-2 a week	Egg Rye Beans Tomatoes	11%	++		None	Jan. 20, 1925.	1	Relieved for 3 months	Will have further exposures.
5. A.T.	10	M	Urticaria, 3-4 Years ago	3 years	1-2 a week	Neg.	8%	++		Lues congenita	March 25, 1925.	1	No more attacks since treatment	Started antiluetic treatment 4 weeks after exposure
6. J.R.	9 Mo.	M	Eczema, when 1 year old	Since birth, 9 mos.	Once every week	Neg.	1%	Neg.		Chronic tonsilitis	March 31, 1925.	1	Not yet well	
7. A.W.	5	M	Urticaria, vasomotor rhinitis 2 years ago	1 year	3 in last 2 months	Neg.	1%	+		Chronic bronchitis	April 25, 1925.	1	No more attacks since treatment	
8. J.E.	9	M	?	2½ years	Every 2d or 3d night	Van Pirquet Positive	5%	++		Beginning tuberculosis	Feb. 17, 1925.	1	Did not return	
9. M.Ch.	5	M	Eczema when 6 months old	?	3-4 times a week	Chicken Salmon		++	++	Eczema	Dec. 9, 1924.	2	Did not return	
10. M.G.*	9	F	Negative	Urticaria for 1 yr.	As often as twice a week	Neg.	6%	+++	+	None	May 26, 1925.	1	No more urticaria since treatment	

(4) was feeling much improved after one X-ray exposure, but he has not been completely relieved from the attacks. He will have further treatment, after his return from a 3 months' trip. In the other child who failed to respond to the treatment (5), we probably are not dealing with a case of pure anaphylactic asthma. No dermatographismus, no eosinophilia nor positive skin reactions were found.

COMMENT

In order to gain insight into the effect of this treatment on the organism, further observations have been made, which in spite of not being conclusive are worth mentioning. The most striking feature is the fact that the positive skin tests turned out negative soon after the treatment (chart 2). In the X-ray appearance of

CHART 2.
Case T. F. (5)

January 16	January 21 One day after Treatment.	January 26 Six days after Treatment.
Beef —	Beef —	
Chicken —	Chicken —	
Milk —	Milk —	
Eggs +++	Egg ++	Egg—
Rye +	Rye —	
Oats —	Oats —	
Corn —	Corn —	
Beans +	Beans —	
Spinach —	Spinach —	
Tomatoes +	Tomatoes —	
Strawberries —	Strawberries —	

the lungs no change could be demonstrated. However, the physical signs of chronic emphysema, such as hyperresonnance, prolonged expirium, diminished expansion of the lower lung margin and the wheezing noises disappeared. (Patients 1, 2, 5 and 6).

In case 5 blood calcium determinations have been made which showed slight increase in the calcium content immediately after the treatment. No ill effects have been observed except the ordinary Roentgen "cat" about five to seven days after the exposure. In regard to the eosinophile cells it has been observed that shortly after the treatment the count rises slightly, but decreases later on.

Children apparently are the best subjects for these studies, since we are dealing with its pure anaphylactic condition, not involved with secondary processes in lungs and heart as seen in adults. The writer has been enabled to apply this treatment to adults. Although some of these patients recovered more or less, the benefit obtained is not as striking as in children.

SUMMARY

The number of patients treated is too limited and the time of observation too short for yielding statistical evidence. These studies, however, are of sufficient conclusive evidence to warrant further investigation into the value of irradiation over the spleen in anaphylactic diseases.

It is believed that with this method a cure can be facilitated by stimulation of the function of the spleen which is greatly involved in the production of antibody as evidenced from the quoted literature. In order to interpret any results from this treatment it is essential that the diagnosis anaphylactic asthma must be definitely established, since other types of "asthma", i.e., thymus enlargement or chronic bronchitis cannot be expected to be benefitted.

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HEMORRHOIDS, THE COMPOSITE TECHNIC, AND LOCAL ANESTHESIA

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"The Poor Ye Have Always With You." So it is with hemorrhoids, and like the poor, they are a fertile subject for discussion—every proctologist has his own pet idea about them.

PREDISPOSITION

Mr. Darwin's theory of evolution has led us logically to an understanding that hemorrhoids developed since we started walking in the erect position. Without valves in the veins leading up from the ano-rectal region, there need be no other assigned cause for hemorrhoids, and consequently we have no preventive.

Some few years ago, an esteemed friend, suggested that we adopt one surgical procedure in performing an operation for hemorrhoids, and he strongly urged his own method; he was wrong! There is no more reason for standardizing such a surgical technic than there would be for standardizing our cuss words, breakfast food, or neckties. The technic should fit the temperament, skill, and equipment of the operator.

FUNDAMENTAL SURGICAL PRINCIPLES

There are, however, certain fundamental principles that should form the background in the development of every surgical technic, namely: safety, asepsis, speed in performance, and the avoidance of trauma. Progress would be most decidedly lacking were all proctologists to adopt the same ideas and methods of procedure. In fact, it is somewhat astonishing to find much of our literature a collection of others' ideas and experience.

THE COMPOSITE TECHNIC

In presenting the "Composite Technic" before the American Medical Association at New Orleans in 1920[1], it was explained that, as the word "composite" indicated, it was made up of the better parts of several technics. The Composite Technic used during the last five years by myself and numerous others, *consists of placing a catgut ligature above each hemorrhoid area, followed by complete excision, no sutures being used for approximation.*

By tying off the afferent and efferent blood vessels of each hemorrhoid area before excision, hemorrhage is controlled, and the possibility of embolus is lessened. Complete excision does away with the varicosities, and elimnates any tendency to recurrence. Excision should not be devastating, but made with refinement, and with but little sacrifice of anal skin. The wound is not approximated with sutures, thereby eliminating infection of any seriousness. A sutured wound is a potential abscess, while infection in an open wound remains superficial and quickly heals. Approximation is well performed by the normal action of the sphincter ani.

I recommend the use of a modified Sims rectal retractor, and explicitly urge that tissue other than that to be excised should not be traumatized in any way; this is important from the standpoint of anal tags and post-operative pain. With the simplicity of this technic, the desirable speed is necessarily developed.

In 1920, I described as a part of the composite technic, a local anaesthesia technic, and in 1922 at St. Louis[2], I again drew attention to this technic, discussing particularly the anaesthetic composition. I use either a one or two per cent solution of novocaine (procaine). This is injected through an iodized spot, well posterior to the anus, and carried superficially from this one puncture on each side of the anus into the anterior area, it is secondly carried deep into the sphincter muscle at several angles posteriorly and laterally. About two ounces (60 c.c.) of solution is used. The only difference that I notice between a one and two per cent solution is *that rapidity and profoundness of anaesthesia accompanies* the stronger solution. I avoid pre-operative morphine. Your attention is called to the fact that this technic is one of the few, if not the only one, that offers perfect asepsis in the introduction of the anesthetic, as well as speed in producing anaesthesia without distorting the surgical field. This last feature is of the utmost importance in doing good anal surgery.

CAUDAL ANAESTHESIA

I now wish to mention my experience during the past few months with *caudal anaesthesia.* I will say that I like it, and that the technic of its introduction into the sacral canal is simple. The rapidity with which anaesthesia is produced depends upon the amount of the solution introduced, as well as its strength. The anaesthesia is more lasting than the ordinary local anaesthesia, though not so rapid in its production. I have noticed a variable mental depression, accompanied by some confusion and faintness in about half of the cases in which I have used it. I am basing my remarks and experiences upon a few cases, approximately fifty, during the last three months. My technic has been to have the patient in my usual right lateral position; (right for the right-handed man, and left for the left handed man). Standing on the opposite side of the table from

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which one would naturally sit to operate, with a 15 CC syringe in the right hand, I find with the left index finger the little depression just above the junction of the sacrum and coccyx, where is located the sacral hyatus. The two and one-half inch needle is then introduced easily and quickly, and the only difficulty being an occasional attempt to introduce it at the wrong angle. Approximately 60 CC (two ounces) are introduced slowly, and on the average anaesthesia has been produced in between three and five minutes. I have tried three strengths of novocaine, one, one and one-half and two per cent. The two per cent plain solution is the most satisfactory from the anesthetic standpoint.

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OCULAR CHANGES IN RENAL DISEASE

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In this paper it is my endeavor to simplify the relation of ophthalmoscopic findings in renal disease and elucidate their relative value from a diagnostic and prognostic viewpoint.

During the years 1827 and 1836 attention was called to the relation of visual impairment and renal disease by Bright. Subsequently more attention was devoted to this relationship. The invention of the ophthalmoscope by Helmholz in 1851 made possible the observation of changes in the media and fundus of the living eye. This incited interest and contributed considerable value. Many physicians are now including in their general routine examination the opthalmoscopic study of the eye. Such an examination can be quickly made without inconvenience to the patient.

In the routine examinations of the patients who complain of blurred vision it is very common experience to find ophthalmoscopic changes characteristic of renal disease. It is not for the opthalmologist to diagnose this type of case, but valuable information as to prognosis is available. If the fundus proves to have no pathology referable to renal disease a much better prognosis can be given.

The clinical changes observed in the eyes are confined chiefly to the retina, optic nerve, choroid and vitreous. Retinitis of the so-called albuminuric retinitis shows itself by loss of transparency of the retina, white spots or patches, exudate and retinal hemorrhages, sclerosis of blood vessels and occasionally retinal separation. The cloudiness of the retina is greatest near the papilla because the retina is thickest there.

The normal retina is transparent, hence is not seen. The red reflex of the underlying choroid shows through. In pathologic conditions as a result of edema or infiltration the red reflex is obscured. White spots or patches are the most characteristic and frequent changes observed in the retina. These opacities are marked contrast to the surrounding red background. The white spots form sometimes a ring around the macula and optic disc. White glistening lines radiate from the macula, arranging themselves in the form of a star. This figure is seldom complete, but is very characteristic when found. When around the disc the spots are usually large and discrete.

Exudate, if present varies greatly as to amount and appearance. It is usually more abundant near the papilla.

Hemorrhages are quite constant, varying as to size, number and position. If in the upper retinal layers, they present a flame like outline and if deeper, are more sharply defined.

The veins are engorged and tortuous, the arteries sclerosed, showing compression of the veins where the artery happens to cross them. This impedes the venous flow, causing edema of the retina.

Separated retina occurs as a grayish reflex in contrast to the normal red reflex. A flat separation is more difficult to detect, but it usually projects into the vitreous chamber so that more plus in the opthalmoscope is required to focus clearly upon it. This separation is most frequent in the lower part of the eye and the visual field is lost for this projected area.

The optic nerve is at first reddened with some blurring of its borders, later the swelling involving the retina and optic disc is accompanied by exudation which may blurr the disc.

Exudation from the choroidal circulation takes place. These white patches are situated more deeply than the patches of a retinitis.

Visual disturbance is always associated sooner or later with the changes of a retinitis, the amount depending on the part of the fundus involved. Very slight changes at the point of acute vision, the macula will cause marked reduction in central vision. Extensive changes may exist in the fundus away from the macular area without impairment of central vision. Both eyes are usually affected, although it may be to a varying degree.

The fundus picture, while characteristic, should not be relied upon entirely in making the diagnosis.

DIFFERENTIAL DIAGNOSIS

In uraemic amaurosis there is a sudden, complete and transient blindness without fundus changes.

The retinitis occurring in septic and metastatic conditions, intestinal parasites and in the cachexia of wasting diseases such as cancer and tuberculosis are similar to nephritic retinitis.

The fundus changes in pernicious anemia and leucaemia characteristically appear as small white spots surrounded by a rim of hemorrhage.

Diabetic retinitis is not associated with inflammatory signs. The white spots are quite small and confine themselves usually to the peri-macular area. This is not always absolute and a urine analysis should be made.

Not all renal cases show fundus changes. With the slit lamp and contact glass we are now able to see earlier changes than with the ophthalmoscope.

PROGNOSIS

The duration of life after the eyes have become involved is longer in women and shorter in men of all classes. The renal disease, due to scarlet fever or pregnancy, is favorable as to life and vision. If retinal separation occurs the vision remains poor in the affected eye unless it returns soon to its normal position.

Patients who have an albuminuric retinitis associated with chronic disease usually die within one to three years. Exceptionally under the very best conditions life has been prolonged several years. Ninety per cent die within two years.

This illustrates the great aid in giving prognosis in renal cases regarding the duration of life furnished by supplementing the routine examination by the ophthalmoscopic examination of the eyes for characteristic changes.

RUPTURE OF THE GALL BLADDER—REPORT OF A CASE WITH OPERATION AND RECOVERY

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A careful survey of the literature upon rupture of the gall bladder during the last thirty years shows that there have been 348 cases reported. Of these, 199 recovered and 149 died. The mortality is, therefore, about 42 per cent. The actual maritality is probably much higher on account of the number of fatal cases which are not reported. It has, therefore, been considered proper to report the following case on account of its serious nature and its interesting history.

The patient is a woman, married, aged 56. Her weight was 192. She has had two children, one of whom died of accident at the age of 34. The other is living and well. She is an American by birth. Her habits are regular and the appetite is good. she sleeps well, but complains of severe colicky pains in the right hypochondrium. Menstruation began at the age of fifteen, was regular, lasted one week and the flow was profuse.

The family history was negative for carcinoma and tuberculosis. Patient had typhoid fever at the age of thirteen and rheumatism at twenty-two when she was ill for three months. Eleven years ago she had a supra-vaginal hysterectomy and ovarectomy performed. Thyroidectomy was performed in May, 1914. A urethral caruncle was removed seven years ago under local anesthesia. She was re-operated at Bay City three years ago for a recurrence of the same condition. A local surgeon removed a carcinoma of the vulva and the inguinal glands October 6, 1919.

The present trouble began while she was convalescing from this last operation. She had severe colicky pains in the right portion of the upper abdomen accompanied by chills, fever and the vomiting of bile. In January, 1920, the pains became more severe and frequent in appearance. She was treated in a local hospital for six weeks. A few X-ray treatments were given at this time and she was sent home with a diagnosis of inoperable carcinoma of the stomach, but no exploratory operation had been done. On May 21, 1920, an abscess ruptured through the abdominal wall in the gall bladder region. The attending surgeon enlarged the incision and a large amount of pus was evacuated. No exploration of the sinus was made and daily dressings were ordered which were continued for nine months.

I was summoned to the case on the evening of March 7, 1921, when a large gall stone had been passed through the sinus tract. It was of the size and shape of the bowl of a clay pipe. The writer extracted another gall stone similar in size from the opening of the sinus. Upon exploration with a long probe it was found that the sinus extended upward where a stone could be felt about three inches from the external opening.

The condition of the pulse at this time was irregular and the temperature was 98.6°F. There were no abnormalities of the skin, teeth, tonsils or pupils and there are no enlarged glands. The breasts are normal. The heart sounds were irregular and the lungs were normal. There was no jaundice present. The liver, kidneys and spleen were normal. There were no hemorrhoids nor herniae present. The knee jerks were normal. On March 12, 1921, examination of the urine showed that it had an acid reaction, specific gravity of 1020 and contained no albumin and no sugar. The hemoglobin was 90-100 per cent. The blood pressure was 100 systolic and 80 diastolic. The patient was placed on treatment with tincture of digitalis 10 minims every four hours.

On March 15, 1921, the blood pressure was 130 systolic and 80 diastolic.

March 16, 1921, operation at Maplehurst Hospital at 8 a. m., assisted by Doctors J. L. Gates and J. F. Adams. Incision made over the right rectus muscle enlarging the sinus. Numerous adhesions were found around the gall bladder and an opening through its wall large enough to introduce the fore finger. The gall stones were evidently discharged through this opening. The gall bladder containing a large gall stone, was removed. Tube and rubber tissue drainage was employed.

The patient suffered from post-operative shock at 12 noon. The skin was cold and clammy and the pulse was imperceptible. The Murphy drip was used and camphor, strychnine and pituitrin hypodermically.

March 17, 1921, the day following operation the pulse was 120. The patient retains no fluid in the stomach and has passed about six ounces of urine in 24 hours. Saline transfusion was performed in both breasts and hemostatic ferment was injected for hemorrhage from the liver substance. The

prognosis was doubtful. March 18, 1921, two ounces of urine were removed from the bladder by catheter. It had a specific gravity of 1012 and contained albumin and numerous casts, but no sugar.

At 8 p. m. of the same day 10 ounces of urine were obtained by catheter and the albumin has disappeared. March 19, 1921, the patient has voided one quart of urine in twenty-four hours and the bowels have moved.

March 22, 1921. The temperature was 99.5° F., the pulse was irregular and the patient is getting 10 minims of the tincture of digitalis three times a day. There was considerable hemorrhage on the dressings, the tube was removed and the clots washed out.

On March 27, 1921 there was a rise of temperature to 101°F., the discharge of pus is diminishing in amount and the tube was removed on March 29th.

April 16, 1921 the patient is still in bed; the pulse is irregular most of the time. The wound is nearly healed, but a little pus still oozes out of the suture openings. April 20, 1921, the urine was acid in reaction, had a specific gravity of 1012 and contained albumin, numerous hyalin and granular casts, lencocytes and red blood cells. May 25, 1921, the patient had made a good recovery, the wound is healed and the urine is normal. At this date, August 31, 1925, four years after the operation, the patient remains well with the exception that she occasionally gets shortness of breath upon exertion.

In reviewing this case it is interesting to note that it was misdiagnosed for two years by the attending surgeons who regarded it as an inoperable carcinoma of the stomach secondary to one of the vulva which had been removed by operation. The fact that the patient continued to gain in weight during this period should have been sufficient evidence that carcinoma could not be present. The colicky pains were also more characteristic of gall stones than of carcinoma.

ETIOLOGY

One of the chief predisposing causes of rupture of the gall bladder is cholecystitis, which is believed to be the result of stasis and infection. The infecting organisms are usually the colon and typhoid germs. Streptococci and staphylococci are also sometimes found present. Infection may pass from the duodenum along the common duct to the gall bladder or it may enter the latter organ from the blood stream by way of the portal vein. Rupture may result from overstretching of the wall of the gall bladder whether stones are present or not. Perforation may result from gangrene due to thrombosis of the blood vessels or infection of the wall. When the walls of the gall bladder are much thinned out they may easily burst by compression of them by the contraction of the abdominal muscles in coughing, vomiting or bending over. The bile which escapes from a ruptured gall bladder may gravitate to the right iliac fossa and give rise to symptoms simulating appendicitis. This type of the disease may be accompanied by the formation of adhesions about the gall bladder. Sometimes no adhesions form and death results, from general peritonitis. Traumatic rupture of the gall bladder is not considered in this report.

Rupture of the gall bladder often occurs without the development of acute general peritonitis. In these cases the bile is practically sterile. Gall stones may ulcerate through the wall of the gall bladder into the liver substance or into the stomach or duodenum or the general peritonial cavity. Moynihan found four such cases among his first twenty cases of cholecystectomy. Sometimes protective adhesions are formed around the gall bladder and the further passage of the stone is thus prevented. Abscess formation may result if there is any infection present, but this is not always the case.

Rupture of the gall bladder is often followed by death when operation is refused or the diagnosis is not made promptly. The abscess may burrow through the tissues of the abdominal wall and rupture through the skin, or into any abdominal organ as the stomach, duodenum or colon. In some rare cases the perforation may be acute and the gall bladder ruptured into general peritoneal cavity, causing a rapidly fatal general peritonitis.

The symptoms of an acute perforation of the gall bladder are those of a severe general peritonitis with pain beginning in some cases in the right hypochondrium but in many cases the pain was so intense and widespread that the case was regarded to be one of perforated gastric or duodenal ulcer or ruptured appendix. Frequently the true condition was only discovered by operation or autopsy. Other diagnoses have been volvulus and intestinal obstruction.

The pain develops suddenly and is intense in severity. It is often not localized, but spreads over the whole abdomen. Chills, fever, marked prostration with collapse and vomiting are often present. The muscles of the abdominal wall are at first rigid and tense, especially over the right hypochondrium. A few hours alter there is evidence of abdominal distention with gas and the pulse becomes rapid, small and sometimes irregular. Jaundice is present in some cases, but is never deep in color.

Operation offers the only chance of successful treatment in acute cases. The operation of choice is cholecystectomy because all of the infectious material is removed.

Korte says that one should estimate the virulence of the infection present and the resistance of the patient. Cholecystotomy gave the best results with 61 per cent recoveries.

Mayo advises laparatomy with cholecystectomy and free drainage. Courvoisier says that a perforated gall bladder should always be removed. An infected gall bladder should also be removed. In one case perforation undoubtedly resulted from bending over to lift water from a well. By this motion the abdomen was contracted and pressure was brought upon the gall bladder, which was filled with stones. The presence of stones and infection are usually necessary before perforation results. Pressure and infection are etiological factors. Courvoisier accumulated all the cases of perforation of the gall bladder up to 1890 in Germany and found that there were 199 out of two million cases of gall stones.

In cases of injury of the bile passages Noetzel observed that aseptic bile may be poured into the peritoneal cavity in large amounts without harmful results. It has also been shown experimentally that bile does not always cause peritonitis when introduced with large amounts of pathogenic bacteria. The author advises operation in all cases of gall bladders which are tender upon pressure with peritoneal irritation. Perforations without infection are not dangerous, but the infectious kind are very dangerous.

Meriwether in 1910 reported 87 cases of perforation and 31 of rupture in 2,135 gall bladder operations. The mortality of the rupture cases was 37 per cent.

McWilliams in 1912 collected 108 cases of perforation of the gall bladder or ducts into the peritoneal cavity, including six of his own. The mortality for the series was 48 per cent and perforation occurred in about 1 per cent of all gall bladder operations.

Whitacre reported a series of ten cases of ruptured gall bladder in 1911 and believed the cause to be a rapidly developing infectious cholecystitis which resulted in an increased tension within the gall bladder with necrosis, ulceration or gangrene of the mucous membrane at first and of the other coats later with a rupture of a portion of the wall of the gall bladder. The fact that normal bile is well tolerated in the peritoneal cavity is shown by the findings in a case operated upon by Garre. The operation was performed two months after rupture of the gall bladder and there was a large localized collection of bile in the peritoneal cavity and the patient recovered. On the other hand it has been found that bile which escapes from a ruptured gall bladder containing stones is highly infectious and often causes fatal peritonitis.

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STAPHYLOCOCCUS MENINGITIS LIMITED TO SPINAL CANAL; PUNCTURE OF CISTERNA MAGNA

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In June, 1919, Dr. James Ayer advocated puncture of the cisterna magna as a means of diagnosis and treatment in certain neurological cases. In August, 1923, he reported a total of 1,185 punctures of the cisterna magna on 450 patients in the hands of some fifty physicians. In this series there was no death which could be attributed to the procedure. Occasionally sudden dizziness occurred, accompanied by nystagmus and nausea. Pain in the face or on one side of the body was noted in a few instances. In two cases of cord tumor under primary ether anesthesia respiration stopped for a few seconds. All of the complications noted above were of short duration and were followed by no ill effects.

INDICATIONS FOR CISTERNA PUNCTURE

Ayer considers choked disc the most reliable guide to conditions in which the procedure is contra-indicated. He states the indications for cisterna puncture as follows :

1. In the treatment of meningococcus meningitic block.
2. In the serum treatment of cerebral syphilis.
3. In the early diagnosis of compression of the spinal cord.
4. For obtaining cerebrospinal fluid for examination when impossible or inadvisable to obtain it by spinal puncture.
5. As one point of entrance to the subarachnoid space for the purpose of irrigation.

In 1921 McCusker reported 55 punctures in 9 patients with no mishaps. Fluid was obtained in most cases at a depth of 4-5 cm. The needle was never inserted beyond 1 cm. The

patients suffered less discomfort than from lumbar puncture. He states that the injection of serum caused no slowing of the pulse. This is directly contrary to our experience in a case of meningitis where the pulse rate was slowed when the serum was allowed to flow in and increased when it was withdrawn. McCusker describes Ayer's technique somewhat as follows:

TECHNIQUE OF CISTERNA PUNCTURE

The back of the head and neck are shaved and prepared as for any surgical procedure. The patient is placed on his left side, the head flexed on the chest and elevated on a pillow so as to bring the occipital protuberance on the same horizontal line as the vertebral spines. Just below the occipital protuberance in the median line a depression is felt between the base of the skull and the spine of the axis. The skin and soft tissues at this point are cocainized. The thumb of the left hand is pressed firmly into the depression and a sharp lumbar puncture needle inserted into the space between the base of the skull and the spine of the axis. The needle is advanced carefully until the resistance of the dura and the occipito-atloid ligament is felt and overcome. Fluid can now be withdrawn.

Ayer believes that cisterna puncture should be done only after considerable practice on the cadaver. This is no doubt highly advisable. However, a large number were done at Bay View by internes with no special training other than some experience with lumbar puncture. The resident supervised our first two or three attempts. There were no accidents and the procedure seemed rather easier than lumbar puncture and less uncomfortable for the patient.

CASE ILLUSTRATING UNUSUAL APPLICATION OF CISTERNA PUNCTURE

The patient, a Jewish girl of fourteen years, was admitted to my ward on the medical service of Bay View Hospital, Baltimore, September 28, 1922, with the complaint of pain in the lower part of the back. The family history was irrelevant. Her personal history was of no importance, except for the story of a severe fall on the sacrum and lower lumbar region three years before. At that time she had had some pain at the site of injury but the symptoms apparently subsided quite promptly and she had no more trouble until the onset of her present illness. Past history was obtained with difficulty through a social worker and was very unsatisfactory. The present illness began four days before admission with pain in the lumbo-sacral region, headache and high fever. She vomited the medicine given her. On the third day of her illness she was taken to a Baltimore hospital where lumbar puncture the following day showed thick, creamy pus. A tentative diagnosis of meningococcus meningitis was made and 10-15 c.c. of antimeningococcus serum were injected into the spinal canal. The patient was promptly transferred to Bay View Hospital. On admission she complained of abdominal pain, but did not remember its duration. She had had continuous fever and much headache since the beginning of her illness. There had been no diplopia and no cervical pain or rigidity.

Physical examination showed a moderately nourished and fairly well developed girl of fourteen. She was mentally clear and co-operative. The cheeks were flushed and the skin hot and dry. The temperature was 103.6 by mouth, pulse 126, strong and regular. The respirations were 36, somewhat shallow, with slight expiratory grunt. There was no diplopia and the extra-ocular movements were well performed. The neck showed slight rigidity but little pain. Kernig's sign was definitely positive on both sides and the patient complained of pain in the back when it was elicited. There was definite tenderness at the site of the previous lumbar puncture between the fourth and fifth lumbar vertabrae, but nowhere else along the spine. The knee-kick and ankle-jerk were sluggish on the left side and were not obtained on the right. The deep arm reflexes and Babinski sign were normal on both sides. There was diffuse abdominal tenderness without rigidity . Except for slight pyorrhea and hypertrophied tonsils the other physical findings were normal.

The W. B. C. was 33,600; A. B. C., 4,808,000; Hemoglobin, 63 per cent. A small amount of very thick yellow pus was obtained by lumbar puncture. Smears showed great numbers of staphylococci and a pure culture was grown in twelve hours. A cisterna puncture done by Dr. Clyde McNeil, the medical resident, showed a very slightly cloudy fluid under greatly increased pressure with a cell count of only 190. Culture of the cisterna fluid was negative.

DIAGNOSIS

The case was diagnosed as a staphlococcus meningitis limited to the spinal canal by block due to adhesions. An X-ray picture taken the following day showed osteomyelitis of the right sacro-iliac joint. The temperature ranged between 102 and 104.2 by mouth while the patient remained on the medical service.

TREATMENT

The case was transferred to the surgical service the day after admission to the hospital and an operation was performed by Dr. Frank Lynn. A longitudinal incision, centered at the site of lumbar puncture was made and the spinous processes exposed. The posterior arch of one vertebra was removed and the spinal canal opened. A large quantity of pus escaped. The opening was increased to a length of about 12 cm. A small rubber tube was passed up the spinal canal and pus promptly began to run out through it. The pus pockets in the sacrum were located and rubber tube drains inserted. Daily irrigations of the wound with hot water were begun two days after operation. Drainage was constant and profuse.

For the first four or five weeks after opeartion the temperature ranged from 100 to 104. It then gradually came down until it was running between normal and 101, usually 99-100. The patient then began to gain weight and two

months later was able to sit up in a chair. At this time there was marked flexion of the thighs on the abdomen. She was put up in a plaster cast which was changed at intervals until the limbs had been straightened. In the course of a year she was able to walk out of the hospital.

I have not been able to discover a case of this sort in the literature. Dr. Arthur Shipley, who also saw the above case, told me of seeing an instance of sacral osteomyelitis in which the infection had involved the spinal canal. Cisterna puncture was not done. The patient died. McCusker reports a case of lumbo-sacral meningitis following an unsuccessful attempt to locate a needle broken off in the lumbar region. The cistern fluid was clear. He irrigated the spinal canal, through a cisterna needle of entrance and a lumbar needle of exit, with Ringer's solution every other day for twenty-four days. I gained the impression that the condition was cured, although this is not expressly stated.

MENINGISTIS OF PYOGENIC COCCI ORIGIN

Meningitis caused by the pyogenic cocci has been regarded as almost invariably fatal. It may well be that in a certain percentage of such cases, as in ours, the infection is confined to the spinal meninges, at least for a time, where it is susceptible to surgical intervention with a fair prospect of success. Considering the desperate character of the disease, it would seem decidedly worth while to investigate the cisterna fluid in those cases of meningitis which are not definitely due to the meningococcus. Our experience at Bay View indicates that there are many general practitioners who could perform the puncture in a pinch without great risk to the patient. Familiarity with lumbar puncture, a strict aseptic technique and the ability to follow printed directions would doubtless suffice for success in most cases and failure would not be likely to damage the patient.

COMMENT

The operation in this case served its purpose in saving the child's life and eventually clearing up her infection. Certain modifications, however, have since occurred to me which, I believe, might have considerably shortened the convalescence and cut down the formation of adhesions. It should have been possible to determine more exactly the level of the block either by making spinal puncture at different levels or at the time of operation. With this information in mind through and through irrigation from above downward could have been established by inserting a large spinal puncture needle just below the level of the block.

Probably a more effective method of treating this type of case would be to open the spinal canal at this point and irrigate through a tube. The latter arrangement would allow the use of continuous irrigation if deemed advisable.

ACTIVATING FACTORS IN PULMONARY TUBERCULOSIS

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There is probably no chapter in the history of medicine more rife with interest than that which deals with the etiology of tuberculosis. Those of us who have delved into its chronicles and extravagant lore, have found theories, amusing and pathetic. In a previous paper[1], we quoted Beddoes, who held the chair of chemistry at the University of Oxford, and who in 1793 wrote his friend, Erasmus Darwin[2]: "If it be true, however, as so many practitioners believe, that consumption is now much more frequent, it is easy, according to my system, to understand whence this has happened: The inhabitants of this country almost without exception breathe a freer and purer air than their ancestors. Nor do I believe that there is any particular in which the difference between the present and some past generations is so remarkable. You see, then, that the subjects of our Edwards and our Henrys and of good Queen Bess, may have found in being more free from so formidable a disease than our delicate and airy posterity, some compensation for the confined air and filth in which they passed their existence." Beddoes concludes with the firm conviction that "Pulmonary consumption is of a fact due to hyper-ogygenation."

The discovery of the tubercle bacillus by Koch dispelled wild imageries and fanciful concepts, and firmly established the direct offending cause. Since that time, however, what progress have we made, and what incontestible conclusions have we arrived at as regards the mechanism of tuberculosis, the activating agent or agents? Not more than fifteen years ago, out of chaos and a maze of speculation, came the theory of childhood infection which insisted that practically all adult pulmonary tuberculosis had its inception in the juvenile years. At first cynically and skeptically received, it soon, bolstered by necropsical and clinical evidence, was widely acclaimed. The past few years have seen it challenged by some, including most recently, the able pathologist Aschoff. So that today, a half century since the direct causative agent was discovered, we are still not in accord as to the contributing factors. However, the splendid work done by scores of investigators in substantiation of this theory leave it rather firmly established, though materially modified.

Probably 50 per cent of all adult pulmonary

tuberculosis has its inception in the juvenile years, the remaining 50 per cent may be attributed to direct massive contact infection in the later years of life. Tuberculous infection in childhood, the precursor of adult pulmonary tuberculosis is, in the main, a glandular infection. It is true, intestinal, peritoneal, bone, and lung infections occur in the early years of life, but they are relatively rare, so that tuberculous infection is almost synonymous with tuberculous adenitis. When we consider that practically 50 per cent of all children have been tuberculously infected, we are impressed with the infrequency with which these cases are diagnosed and rationally handled, the reason being that tuberculous adenitis is an insidious infection which, as a rule, runs a mild self-limited course. When we remember, however, that this infection not only offers the atrium for the dire scourge of adult life, but what is more, that it may and in many instances does provide the focus and organisms which later are to transfer their scene of activity to lung tissues, we are reminded of the necessity of closer attention to the primary infection.

The detection and management of tuberculous infection is not within the scope of this paper, but leads us to a consideration of the topic of discussion—Activating or Predisposing Factors in Pulmonary Tuberculosis. Confronted with the fact that roughly 45 to 50 per cent of all adults have been tuberculously infected during infancy or childhood, and harbor within themselves a latent focus and potentially virulent organisms, we are apt to question, why less than 5 per cent develop metastases in the guise of an active lung lesion? The answer, of course, is to be found in the matter of immunity—resistance. The causes or factors which disturb and lower this balance of resistance, and thereby pave the way for activation, form the basis of this paper. While it is true that any condition, circumstance or combination of circumstances which lower vitality, thereby in the same ratio act as predisposing factors, it has been thought advisable to review and group the more important ones.

1. Acute Infectious Diseases:
   - Measles.
   - Influenza.
   - Whooping Cough.
   - Scarlet Fever.
   - Diphtheria.
2. Respiratory Diseases:
   - Bronchitis—Acute and Chronic.
   - Pneumonia.
   - Pleurisy—Dry and Effusion.
   - Asthma.
3. Foci of Infection:
   - Tonsils, naso-pharynx, sinuses, teeth, mid-ear, intestinal, appendix, gall bladder, genito-urinary.
4. Habits:
   - Fatigue.
   - Alcohol.
   - Tobacco.
   - Veneral.
   - Occupation.
5. Massive Re-infection.

Measles—For almost fifty years, in fact from the time that measles was recognized as an infectious disease and attained a true identity, up to the present, it has been associated by the profession and the laiety alike with pulmonary tuberculosis. The why and wherefore of this belief is not real clear. Measles, as a rule, is a rather mild, inoffensive infectious disease, running a brief febrile course, with slight skin manifestations, some general and gastro-intestinal disturbance, and a quite negligible bronchitis. And yet even today it is looked upon askance. The writer had the rather unusual opportunity some six years ago of checking 596 cases of measles in adults. The work was done on soldiers, thus affording repeated observations. These men were all tuberculosis suspects, whose chests had been gone over repeatedly before they contracted measles, and careful record kept. They were re-examined ten days after they had convalesced from measles, again thirty and sixty days later. The results published in 1919[3], were very interesting, and were briefly as follows: Of the 596 cases of measles, only two showed unmistakable signs of activation of an old quiescent lung lesion directly attributable to the measles infection. While we appreciate that one series, even of such considerable magnitude, is no criterion, it has served to make us skeptical as to the importance of measles as an acitvating factor.

Influenza—In contra-distinction to measles, influenza has never been looked upon with any great suspicion as a predisposing or influencing factor in pulmonary tuberculosis. The texts, old and new alike, and even recent monographs, cite it merely as a possible cause of re-activation. Again it was our good fortune to do some work on this subject.[4] In 1919, we had under close observation thirty cases of quiescent pulmonary tuberculosis, none of which, on repeated examinations covering a period of six months, showed signs of activity. Of these thirty cases, seventeen contracted influenza, and a study of their subsequent course is of interest. Of the seventeen cases, four died, and the remaining thirteen ran the usual severe toxic course, and then drifted into a protracted convalescence. Within three months, six cases, or almost 50 per cent, showed physical evidence of re-activation, and a positive sputum.

During the six years just past, since this work was done, we have given the matter our close attention, and have added further observations: For example, during the years of 1920 to 1924, we encountered eighteen cases of frankly active pulmonary tuberculosis in adults, within from one to four months after a

severe influenza, all of whom gave a history of perfect robust health prior to this infection.

Since the publication of our original work in 1919, calling attention to the importance of influenza as an activating factor, several interesting corroborative articles have appeared. Foremost amongst them if one by Dr. Louis Boisliniere of St. Louis.[6] In the course of this publication, Dr. Boisliniere gives the following figures: In fifteen months, 409 cases of active pulmonary tuberculosis were admitted to Mount St. Rose Sanatorium. Of this number, ninety-seven, or 24 per cent, gave a history of influenza. And of this ninety-seven, sixty-two gave a history of robust health prior to their influenzal infection. Dr. Boisliniere's article also contains several interesting and relative quotations: For example, that of W. D. Tewksbury of Washington, who found in a series of 104 tuberculous patients, 25 per cent the direct sequel of influenza. Again, another series provided by Dr. Edward R. Baldwin showed fifty-two cases out of 200 attributable to influenza.

We have therefore come to look upon influenza with the greatest apprehension, and have made it routine practice to re-examine all influenzal patients at thirty-day intervals for a period of six months.

Gas Poisoning—In 1919 we were afforded the further opportunity, while in the service of the U. S. army, of examining some 2,000 cases of chronic gas poisoning, with the view of determining whether these gases had served as an activating factor towards pulmonary tuberculosis. The results were published[5] at that time, and the summary was as follows: "That gas victims, irrespective of the type of gas and severity of attack sustained, showed no marked predisposition towards active pulmonary tuberculosis, or toward re-activation of a healed or quiescent pulmonary lesion."

Whooping Cough—It is our belief that whooping cough, because of the usual severe and long drawn out bronchitis and the general devitalizing influence of the disease, is a very much under-estimated factor in activation. We have quite frequently noted the relighting and re-establishment of an active tuberculous adenitis in children following convalescence from this disease.

Scarlet Fever and Diphtheria—Of the two, we believe the former, the greater menace. In fact, the universal and early rational use of anti-toxin has completely changed the status of the latter disease.

Respiratory Diseases: Bronchitis—The usual acute and subacute bronchitis, in which the inflammatory process is limited to the lining of the large bronchial trunk, and does not invade the bronchioles, which runs a mild febrile course of one or two weeks, is inoffensive and inconsequential. However, the type, often the aftermath or extension of a coryza, in which the purulent sputum is practically a pure strain of staphylococci, which is followed by a general depression and constitutional symptoms of varying degree, is, we believe, a very considerable menace.

Pneumonia—Here we have a disease which should logically, from both a clinical and a pathological standpoint, prove a powerful activating factor. Clinically, because it not only calls forth all the active defensive properties of the human host, but carries on, and demands, as a rule, most of the reserve. It surcharges the blood stream with a foreign foe, and annexes the immunizing properties of body cells. Pathologically, it should predispose, through dialtation and engorgement of air vessicles, and the temporary defunctionizing of very considerable lung tissue. And yet our experience and statistics fail to convince us of the seriousness of this disease as a causative factor in relighting a quiescent focus.

Pleurisy—Primary pleurisies, both plastic and with effusion, are almost always of tuberculous origin. They are, however, usually the result of direct extension from a pulmonary focus, and therefore are, strictly speaking, not an activating factor. They are a symptom, an effect, rather than a cause. Occasionally, it is true, a tuberculous pleurisy has its origin in the pleura, and then by contiguity effects a direct extension to lung tissue. The so-called "secondary non-specific pleurisies" which either accompany a pneumonia, or follow a trauma to the chest wall, are in our experience unimportant as predisposing factors. An exception to this statement must be made in the case of children. A hydro-thorax occasionally, and an empyema frequently acts as the direct activating factor in lighting a pulmonary focus.

Bronchial Asthma—Statements varying from "bronchial ashtma and tuberculosis do not coexist", to "bronchial asthma rarely predisposes to tuberculosis", are encountered, and both are faulty. We have come to believe that acute attacks of bronchio-spasm, running a brief course, are relatively unimportant. In the typical bronchial asthma accompanied with blood changes, and local and constitutional manifestations, we have quite frequently been able to consider this disease the direct cause of the relighting of an old focus.

Foci of Infection—We have for the past few years found the subject of foci of infection of absorbing interest in relation to activation of pulmonary tuberculosis for diverse reasons. In the first place, we encountered, at first only occasionally, later quite frequently, instances in which a very trivial focus unquestionably was directly responsible for lung activation. The site of these foci varied widely, in fact, practically ran the entire gamut—tonsils, nasopharynx, sinuses, teeth, mid-ear, intestinal, ap-

pendix, gall bladder and genito-urinary—and in about that order as regards frequency. We found the matter of focal infection of great interest in the second place, because of the great frequency with which such foci simulated clinically an early activation. In the case of a tonsil or tooth or naso-pharynx, we encountered a history most baffling because of its similarity with our pulmonary histories. The same story, for example, of depression, fatigue, anorexia, weight loss, slight elevation of pulse and temperature. In addition, in the case of tonsils, the history of cough with expectoration of blood. In the third place, the matter of focal infection plays a very considerable part in the management of a reactive lung lesion. Frequently such an active focus is favorably influenced by the removal of the activating cause.

Habits—Personal habits, we believe, constitute a most powerful predisposing force if we accept the caption—Habits—its its broadest sense, and include, first and foremost.

Fatigue—Just as rest is probably immunity's greatest synergyst, so is its antithis, fatigue, in our opinion a very much under-estimated element in producing activation or disease. We like to think of fatigue as being either of physical or mental variety.

Physical Fatigue—While it is unquestionably true that this condition may be occasioned by a variety of circumstances, three elements stand forth as frequent offenders. These are insufficient sleep, faulty ventilation and lack of muscular exercise.

1. Sleep. The amount of sleep required varies so widely with the individual, and is influenced to so great an extent by age, occupation, habit, etc., that it is difficult to determine the essential requirement, nevertheless, a protracted and marked deficiency of sleep soon leaves its imprint. In addition to the amount of sleep obtained, the element of regularity must be considered. We are all convinced, either from personal experience, or from observation, of the devitalizing effect of frequent irregularity in hours devoted to sleep, and we have been impressed with the fact that ten hours of sleep in one night will not compensate for the curtailment to four or five hours on the night preceding. There is no such thing as "catching up on sleep."

2. Faulty ventilation at home, at work, or at play, is an undermining factor of consequence.

3. Lack of muscular exercise, especially in individuals of sedentery nature, leads in time to physical weariness.

Mental Fatigue—Worry and fear not only lead to apathy towards work and recreation, with the resultant loss of ambition and listlessness, but when prolonged, invariably brings on fatigue. The passions, jealousy and hate, while fortunately, as a rule intense but brief, if drawn out over a considerable time, must be considered a source of mental fatigue.

Libido—It has never been clear to us why little or no attention has been directed to this not infrequent state of mind encountered amongst adolescent youth, at the age from which pulmonary tuberculosis draws most of its recruits, and why this condition should not be listed amongst the predisposing factors. The term libido, like fatigue, is used in its broadest sense. It refers not alone to excessive venery, nor does it stop with masturbation. It includes and applies particularly to that group which, through the influence of endocrine dyscrasia, mental taint, or heredity, are sex-engrossed. The individual who is constantly under mental sexual excitement, with a resultant impairment of sleep, appetite, etc., who rarely enjoys complete relaxation, whether at work or at play, consistently develops signs of mental fatigue.

Alcohol—The abuse of alcohol, particularly by the young as a flaunt to experimental legislation, is a factor of growing importance.

Tobacco—The use of tobacco, except by the very young, or by any one in marked excess, does not appeal to us as worthy of note.

Venereal Disease—Gonorrhoea, untreated or of severe grade, we have found occasionally a factor much to be feared.

Occupation—Texts not so obsolete but that they still lay claim to space on our shelves, ranted voluminously against "hazardous occupations", improved sanitation, and humane legislation have stricken them out, so that today no such directory exists. Any occupation attended with adequate fresh air and sunshine is safe.

Massive Reinfection—Surprisingly meager attention has been given by research workers and clinicians to this absorbingly interesting phase of tuberculosis. Whatever work has been done, has been largely of a theoretical nature. This has lead to unsubstantiated deductions, dogmatic aphorisms, and frequently, we believe, to most illogical conclusions. Take, for example, the very widely accepted statement that few, if any, individuals in close contact with an active consumptive, in virtue of this contact, reactivate themselves. A certain amount of work has been done in an attempt to prove this statement. Sporadically statistics are compiled by various institutions, setting forth that the entire absence of active pulmonary tuberculosis in sanitoria attendants, nurses, physicians, etc., should be accepted as proof of a gradually developed immunity on the part of this personnel against clinical pulmonary tuberculosis. We are forced to take a firm and decided issue on this point. Certainly the experience of clinicians in the broad field of community practice does

not bear it out. Surprisingly and discouragingly frequently we encounter active pulmonary tuberculosis which must be attributed to massive reinfection, through close and continued contact with an open tract consumptive. So frequently of a fact, that we have become convinced that massive reinfection through continued close contact is an all powerful reactivating force.

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"THOSE GOOD OLD TIMES," AS SEEN BY A PHYSICIAN

(PART V.)

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FLINT, MICHIGAN

ASIATIC CHOLERA

This is an acute, highly fatal, intestinal disease. The onset is very sudden, the patient is prostrated and soon haggard from the great loss of water due to the diarrhea. He is dried out like a sponge after squeezing. In 30 to 80 per cent of the victims death comes in a few days, at times in a few hours. So sudden is the beginning and so soon the death that it has been said—"Cholera begins where other diseases end—in death!"

Asiatic cholera seems to have its home in the delta of the Ganges river. From here it has spread to other parts of India and Asia since some time before Christ. A description of this disease as vishuka has been found written 6 centuries B. C.

The first European to describe it was Carrea, a Portugese, who stated that in 1503, 20,000 men died of it in the army of the Soverign of Calicut. He describes another epidemic in 1543, which was so sudden and so severe that a poison was supposed to be the cause. Others after this frequently noted its occurrence.

Paisley, an Englishman, wrote of an epidemic in Madras in 1774. Since then the English have had much to do with it.

In 1781 an English army officer marching with 5,000 Bengal troops described his experience as follows:

"Death raged in the camp with horror not to be described, and all expected to be devoured by the pestilence. In vain I studied to discover the cause of our misfortune. I attributed it to a poison, but at length found that there had been a pestilential disorder raging in the parts through which our first marches lay, and that part of our camp was already drinking the air of death and destruction."

McNamara describes an epidemic in 1783 among some pilgrims and reports that 20,000 were killed in 8 days. The Hindus make pilgrimages to the Holy Ganges river as do the Mohammedans to Mecca and this habit is responsible for a great deal of evil that cholera has done. In 1816 it began its travels to other parts of the world, following the lines of travel mostly by sea. It spread for seven years when it died out. During those years it visited Borneo, Java, the Phillipines and China to the east and Arabia, Persia, Syria, Egypt and northern Africa to the west.

In 1826 the second emigration came and continued for 11 years, ending in 1837. This time it spread over the greater part of Europe and portions of America. This epidemic seems to have been brought by pilgrimages of the faithful to Mecca and from there spread by other pilgrims to all points of the compass.

The third great pandemic started in 1846 and lasted until 1862. It killed in France, 150,000 people. It entered this country through New York and New Orleans at the same time by means of two German emigrant ships.

It followed the Mississippi, Missouri and Ohio as far as they were navigable. It was carried across the plains by gold-seekers to California. It visited Detroit with severe results and came to Flint with deadly toll.

Dr. Murray, who only recently died, has told to me his experiences with it at that time.

The fourth pandemic lasted from 1864 to 1875 and in Prussia alone it killed 114,683 victims.

The fifth pandemic began in 1883 and reached New York harbor to be stopped by our quarantine methods. In European Russia, through which it came, it destroyed 800,000 people. In Hamburg there was a particularly severe visitation at this time and the fact that the disease was spread readily by drinking water was here proven.

Hamburg took its water supply from the Elbe river and distributed it without filtration. Altona, a city near by, also used the same water, but has a modern filtration plant. In August, 1892, cholera struck Hamburg suddenly and for days there developed 1,000 cases a day. There were 16,950 cases in all of whom 8,605 died

in four months. It was a veritable city of the dead.

In Altona, but 512 people had it. Speaking of these epidemics, Vaughan says:

"In all these excursions, among all kinds and conditions of men, in every degree of civilization, in the tropics and amid the snow and ice of northern Russia, in the thronged city and in the emigrant's wagon, with high and low, slave and master, wherever it has traveled, cholera has maintained its individuality and has shown no modification in manner of attack or variation in the symptoms induced in its victims. Its vehicle of transport has been man's body and it has followed the lines of human travel, on foot, on horse or camel, by stage or ox team, by steam on land and sea. The sick and dying have scattered its progeny around the world. The science of preventive medicine is the only detective who can trace this criminal, the only officer who can arrest it and the only executioner who may finally remove it for all time from the earth."

Such a terrible disease invites attack by men of science and it was thoroughly studied.

The mode of spread was early traced. In 1865 cholera broke out among 90,000 pilgrims in Mecca; 30,000 fell victims to it there and the rest fled in all directions spreading it as they went. It was so easily traced that maps of its spread were made and they all could serve well as maps of the routes of sea and land travel, for they coincide.

It was found that while it did spread from person to person through the medium of the things they handled, that the great outbreak in cities were due to pollution of the water supplies.

It could be kept out of cities by keeping out travellers from infected districts.

In 1883 Koch discovered the germ causing it and with this known, cholera becomes an open book, and its control readily handled in well organized civilized countries. Since 1873 many cases have been brought to our ports only to die out there without gaining admittance. In one year there were 72 cases found in the port of New York.

It has become one of the most controllable of the pandemic diseases as a result of scientific medicine.

THE DEVELOPMENT OF THE SCIENCES

Various definitions are given for science such as, "It is a systematic arrangement of *demonstrated* facts relating to the external world as recorded by our sense impressions." That is probably good, but not so simple as, "A science is composed of sufficient *proven* facts to explain a certain subject."

The term science is used loosely to cover most anything. Most newspaper science is not science, just as most newspaper "professors" are not learned teachers.

Since a science depends on demonstrated facts, no science can be built upon faiths or beliefs alone. No science can be founded upon *unprovable* things.

In cross-word puzzles and with so many people science is made synonymous with art, skill or wisdom. It is none of these, though they all are useful in its development. Healing the sick, religion, dancing, necromancy, business, baseball, etc., are not sciences even if their followers call them so.

A science must cover the field well enough to give a whole understanding of it and every theory advanced in explanation should be based on truths which are actually proven. The basis is always demonstrated truths.

There are certain ear marks by which the facts of a science can be identified and which separates them from the ordinary facts of experience.

1st. *They are subjected to the most severe criticisms before acceptance.* Scientists are all from Missouri, so when one of them thinks he has found a new truth, the rest of them at once question it. They subject it to all the investigations at their command and it is only when it stands this ordeal unscathed that they add it to their common store.

Nothing is believed just because it seems plausible or because some one said so or because it was read in the paper or because some influential man advanced the idea.

2nd. *The facts of science are impersonal.* They may be discovered by some one with a selfish motive for advancing them, but before acceptance they go through so many disinterested hands that they are separated from any bias in so far as they humanly can be and even if they do violence to our preconceived notions or even to our own welfare, they nevertheless are material for a science so long as they are true.

3rd. *The facts of science are accepted practically unanimously by those who have the proper training and knowledge to understand them.* Controversies often arise when a new truth is discovered, but these fade away as the sceptics fail to shake it by their investigations, until at last it is believed by all of those who are competent to judge it.

It follows from this that there can be but one science. There are schools of art and philosophy, but only one chemistry, one physics, etc.

Since there were civilized men there have been those who were curious and intelligent so

that speculations were indulged in by them to explain their observations.

Each of the civilizations developed arts of their own; philosophies of more or less merit; literatures some of which are yet worth study. In the applied arts they went far, for they could extract metals from ores and work them with a skill in some ways never surpassed; they tanned and worked leather; they made fermented wines and beers; they made glass and pottery; they manufactured starch and the Arabs manufactured arsenic, borax, alum and acids like nitric and sulphuric. But not one single chemical process underlying these arts did they understand. What they knew was the result of fortuitous accidental discovery, what they did was entirely by rule of thumb, what skill they showed was limited to deftness of hand alone.

The Greeks, who were the most advanced of all, in some of the arts have scarcely been equalled, in reasoning they were adepts and developed philosophies which we pattern after today. But they never had more than inklings of material truths, they made many surprisingly shrewd guesses, but they never developed any exact science. The facts they gathered were never subjected to the needed tests, their shrewd surmises, often uncanny in their nearness to what was really so, never passed the stage of disputable beliefs. They could establish but few facts as fundamentally and incontrovertably sound—and they could never pyramid such a cumulative mass of truths as to found a science.

They established their beliefs by thinking, reasoning, meditation, disputations, arguments and in such methods acquired much skill.

Where they failed was in not using check-ups, tests of precision, parallel controls and the means of verification as is done today.

There is a comparatively recent school of philosophy which explained the limitations beyond which the ancients could not go. They are called Pragmatists and they are doubters of the show-me type supposed to be so common in Missouri. These men declare that practical workableness is the only test for learning the truth of an assumption.

They say that no knowledge is determined or determinable exclusively by abstract intellectual considerations.

No number of properly interpreted observations and declarations of wise-men established the fact that the world was round so well as did the simple trick of sailing around it. It became then a settled truth for all intelligent people and was removed from the realm of questioned theories.

The best of human minds are not equal to the task involved in thinking out fundamentals without error. Trials and check-ups are necessary to keep them all from mistakes.

With all their tremendous experience, with all their special knowledge, and with all their practiced cleverness, automobile engineers cannot design a car on paper which will make up in the metal without "bugs which must be ironed out" by trial before it is practicable. And a science is ever so much harder to build than an automobile.

The pragmatists are right, all deductions must be checked up by control tests and experiments which show our most plausible conclusions are astonishingly often wrong. The basis of all such tests is comparative measurement and this requires exactness of a very high degree. In addition the results of such observations must be available to other men. The more men who know of them the more likely they are to be of use.

It may take a life time to prove a single fact and to have the knowledge of it die with the discoverer would render his research useless.

It has taken thousands of investigators in thousands of places to prove the hundreds of things we now know to be really so.

A French army surgeon (Laveran) stationed in northern Africa with his microscope (an instrument of precision), found by actual examination, minute parasites in human blood which he suspected were the cause of malaria. Similar examinations did not show them in people who were free from malaria. An English army surgeon (Ross) in India, read of this and confirmed this discovery. He then went further and with his microscope found them also in certain kinds of mosquitoes which he identified to the rest of the world by its scientific name. He found by actual tests that malaria in man was produced by the bite of such an infected insect and by no others. He found by actual tests that only this particular kind of mosquito could be infected by biting a malarial patient and carry the disease. All this took years to reduce to proven facts. Then an American sleuth (Howard) in the Department of Agriculture in Washington, took up the chase. He trailed the mosquito to its home, he learned its complete routine of life, when and where it lived, when and where it flies, how and what it eats, and drinks, how, when and where it rears its young, how it breaths and the differing habits of the male and female This required long, tedious observations, innumerable experiments and a consuming passion to learn the truth.

About this time we wanted to dig a canal across the Isthmus of Panama, but malaria and other diseases had whipped the French who

tried it and would as readily have prevented us from finishing this work. So the United States sent one of its army officers (Col. Gorgas) to Panama to make it possible for white men to live there long enough to do this job.

He took his microscope, his books, his dyes, his solutions, his laboratory glassware and other paraphernalia and with the help of assistants, from typists to ditch diggers, he turned this deadly pest-hole into a health resort and then the canal was dug.

What Col. Gorgas really did was to apply for a useful purpose, facts discovered in many distant parts of the world, demonstrated to be true by innumerable precise tests, recorded so that the civilized world might keep them, published so the world might know them and collected and arranged into a complete and finished chapter on malaria in the science of epidemiology.

Such a marvelous achievement as this was impossible for even the great men of the Golden Age of Pericles. Some of them, with an acumen which surprises us, figured that malaria was due to a minute living organism associated with swampy regions and pestiferous insects, but it was a mere useless guess and pitifully impotent to stay the malaria which devastated Greece, destroyed its culture and cast a malignant weakness on its people to this day. *Adequate methods of precision and means for diffusion of knowledge could have saved them as it does us.*

Mesopotamia, Egypt, China, India, Greece and Rome all had wonderful flourishing civilizations, but without real sciences. China today is a typical country of this past type with a great culture of its own, in art, philosophy and handicraft having reached superior heights, but nevertheless scienceless and stagnant.

We, too, would have been as China is, were it not for the Renaissance. The name Renaissance is given to that period of history following the dormant, semi-barbarous, superstitious, ignorant, cruel Dark Ages when the whole European world made such amazing changes for the better.

In those days they did have great universities with thousands of students attending them, but these were only for nobles and churchmen. There were no schools for common folks at all. There were only two classes of people then, the nobles and clergy and the peasant. There was no middle class.

In their schools and universities they taught church law, theology, grammar, rhetoric, logic, music, metaphysics, languages, psychology, ethics, politics, medicine, surgery, law, physics and mathematics. There were no laboratories. Even anatomy was taught without dissections and was largely erroneous. In the whole curriculum there was not a science as we know them, not one group of indisputably sound tested truths. Speculation and superstitious theorizing were the basis of learning. These schools could not have brought the great change.

Gunpowder was introduced about this time and has been credited with causing the downfall of the feudal system and so bringing the Renaissance.

Navigation became bolder with the compass, and the Americas and much of Africa and Asia were opened to Europe and this has been said to have stimulated the new life.

The gold seized by the Spanish in the New World has been credited with preventing a throttling financial situation and bringing a revival of progress.

The Crusades reopened Europe to Asiatic culture which has been assumed to be a great factor in this rebirth.

There developed in the latter part of the Middle Ages a middle class of people made up of tradesmen and craftsmen. The great guilds and commercial organizations developed then and this middle class has been considered the backbone of the Renaissance.

Commerce developed with trade routes to the most distant countries. Large commercial cities were built, large fortunes were founded and the revival of learning has been attributed to the riches and travel.

Accountants were needed when commerce came and the cities found it necessary to found schools for the new middle class and the common people. They were called writing and reckoning schools and for the most part taught the three R's and some languages. This founding of public schools has been given as a factor in the change.

When Constantinople fell to the Turks in 1453, its scholars fled to Europe and carried with them the great Greek classics which were added to the Latin and gave a broad culture with a new stimulus to thinking in the manner so highly developed by the Greeks. This influence has been given great credit for its part in the renewal of learning.

The Reformation in Church thought and church practice which accompanied the Renaissance was a large factor in the change. Men learned from a direct study of the Bible the doctrine of the brotherhood of man which Christ had taught. They learned a doctrine of equality which has had a great part in ending feudal rules and autocratic government. Every man learned he had a right to think as he chose,

to live in just relations to his fellow men, and not be the object of every capricious mood of a superior. He learned he could rise as high and go as far as his merit could carry him.

The logical outcome of such a new philosophy of life was to teach men to respect the rights of others as they wanted theirs respected and the cruelties of the past rapidly faded. The thirst for knowledge increased and the resulting demand for freedom of thought and action was deadly to the old caste system.

So the Reformation and the Reformers who led in it are often believed to have made the Renaissance.

All these factors acting in a caste-bound, near barbarous type of civilization no doubt would create a new state of affairs, they might bring again a culture such as the Greeks had had, great in the arts, but they alone could not have led to the sciences and present enlightened age. Ninety-eight per cent of the people would still have had to do the most arduous kind of work from sun to sun to support them all.

Such a civilization could never have freed itself of heavy manual labor nor protected itself from ruinous epidemics which wrecked previous nations. It probably could have reached a stationary level somewhat higher than that of China.

But these Europeans had two agents at their disposal which gave them the means to gather new knowledge at a rate never before experienced. In fact, this came so fast and caused such frequent upsets that we have not yet adjusted ourselves to them and the end is not yet.

There two factors were: 1. Practicable printing; 2. Usable arithmetic.

Men of the Stone Age in the island of Malta used dies to make desired impressions. The Greeks and others used dies to stamp signatures. The Chinese used wooden blocks to print coarse characters, but the elaborateness of the characters and their enormous numbers made printing impracticable.

The Arabs captured eight Chinese paper makers in one of their numerous fights at Samarkand about the 7th century, A. D. From them they learned the art of paper making and then they introduced it into Spain in the 12th century when they occupied that country. From here the process spread all through Europe.

Paper furnished a smooth, uniform, thin sheet, easily obtained, which has remained the ideal material for printing and with a suitable phonetic alphabet of only a few characters, printing became easy and inevitable. Inside of 100 years after printing was started in Europe presses were everywhere and book making became a passion.

This printing gave the means of recording and diffusing knowledge for all men. Without it a science could not develop.

The Arabs also contributed the other agent about the same time.

The whole world used some modification of the old Indian system of numerals, in Europe it was the Roman arithmetic. This we all know a little of for it is still used to mark the hours on clock dials, to number chapters and to give the year of printing on the fly leaf of some books. But it is so cumbersome and so coarse that its use has always been limited to simple problems.

Multiplication and division were almost impossible with it. Addition and subtraction were awkward. Fractions were not used and decimals were unknown so that the fineness, accuracy, and workability for the sciences were absent.

The Arabs took this old arithmetic and worked wonders with it. They gave each character a value according to its position, as units, tens, hundred, etc. They invented the zero to show the vacant places. The zero is considered by some the greatest invention of the world. They invented the decimal, giving each character a fractional value according to its position from the starting point. These three modifications in the system of numerals made arithmetical processes such as multiplying, dividing, adding, subtracting, comparatively simple; they also made it possible to designate the infinitely fine or infinitely great; they gave a type of arithmetic capable of great development by others such as has taken place in logarithms, calculus, etc.

With such an arithmetic great accuracy was possible for the first time. Methods of precision were rapidly introduced and men of scientific tendency began to deal with the exact and concrete instead of the general and abstract. They could compare and measure with ease and accuracy and naturally began to check up on their beliefs.

Instruments were rapidly invented with a preciseness hitherto unobtainable and unknown. Vernier (1580-1637) invented his scale for accurate measuring.

Optical lenses were figured out and ground with mathematical accuracy. Then the compound microscope, the telescope, and later the spectroscope were invented. Accuracy of time measurements were developed with the inventions of the watch and the clock. Weighing of an almost unbelievable delicacy was early in use.

The unsatiable curiosity of man, given these new means of discovery, pushed him on to solving the riddles of the universe with a rapidity

never possible before. The superstitious beliefs in the demoniacal and other supernatural forces now began its great retreat before the unfolding by the sciences of the orderliness and impersonal character of natural forces.

They soon found that some of the unverified and unverifiable surmises of the old Greeks as to the solar system were true. They proved them and soon knew the heavens so well that they could accurately locate themselves on the earth by observations and figuring. The science of navigation was then born and sailors became bold explorers instead of timid shore followers.

For hundreds of years explanations for the constitution of matter as deduced from observations were extremely absurd . It was thought that when anything burned a mysterious element called phlogiston freed itself from the substance and disappeared in its attenuation.

Robert Boyle (1627-1691) put an end to this honored nonsense when he burned metals and found they increased in weight, showing something was added to them. At that moment the old chemistry, a child of the imagination, met its death blow and a new chemistry, born of mathematical precision, came into being.

Physics was removed from the realm of bizarre speculation to a firm study of sound, heat, light, electricity, magnetism and radiant energy. The conceptions of energy were far from the truth and of no use before.

Mechanics, a knowledge of mechanisms and structures, developed as a new science and made possible some of the great wonders so commonplace to us.

The manifestations of life were examined and experimented with until a whole biology has resulted which has unravelled for us the most interesting problems of them all. Bacteriology, one of its branches, has removed the mystery as no other study has done. It has given men the means of shaking off his greatest foes.

It is unnecessary to point out to you the whole change in the aspect of life for civilized people following the exact sciences. The most important developments have followed the practical application of mathematics, chemistry, physics and mechanics in harnessing the forces of nature with turbine, steam engine, dynamo and motor and freeing mankind of much of his most grinding and narrowing toil as well as opening up unlimited new possibilities in comfort.

The transportation of words, writing, printing, commodities and people themselves has enlarged every man's knowledge and interest from a limit set by his own walking range to one that is world wide and encompassing an inexhaustible store of help and information.

I have dwelt at length on the growth of the exact sciences because it is usually not covered by the available histories and that full credit may be given to one of the greatest, if not the greatest of man's inventions, the Arabian Arithmetic.

Without printing and this arithmetic, the present advanced civilization could never have developed, with them it was inevitable that it should develope!

(The End).

WAYNE COUNTY MEDICAL SOCIETY PRESIDENTIAL ADDRESS

WILLIAM J. STAPLETON, JR., M. D.

Mr. President, Fellow-Members of the Wayne County Medical Society:

This evening, as retiring President of our Society, it is quite proper for me to give a short resume of the past year. On an occasion like this one has a feeling of both pleasure and regret. The pleasure is twotold—the being relieved of the duties and responsibilities of the office, and the fact that these duties are to be taken over by a gentleman who is so capable of filling the office as our new President —Dr. Henry Luce; and for him I hope you will all work with the same spirit you have manifested towards me. The regret I have is in the fact that we have not as yet obtained a new and fitting home for our Society—one of the largest in the world; this task I leave to our new President.

At this time I want to express my grateful appreciation to the Board of Trustees, the Council, the Chairmen and members of the various committees, and to every member of this Society who has so faithfully worked with me this year. Without ths co-operation no Society can thrive. With it any Society can not help flourishing. Especially am I indebted to the Chairman of the Program Committee, Dr. Henry L. Clark, for his most interesting and scientific programs. Never has the Society had such large audiences as it has had during the last year; and the credit for this in a large measure rightfully belongs to him.

To Dr. B. H. Larsson, Chairman of the Entertainment Committee, fell the burden of providing entertainment for the members and officiating at the dinners given to our guests—to him we say "Thanks."

To Dr. William Reveno, Editor of the Bulletin, I also feel greatly obligated for his work as Editor and his splendid spirit of co-operation. The Bulletin has been kept up to its high standard and has at all times shown a desire to give members all news of interest so that they might be informed of the manifold activities of their Society. The Bulletin has tried to give a square deal to everybody.

To the Secretary of the Society, Dr. Richard M. McKean, I wish to extend thanks for his efforts in making the year's work easy. You will notice that the Wayne County Medical Society is now represented monthly in The Journal of the Michigan State Medical Society by a report from our Secretary, giving briefly the work done.

The work as President has been rendered a pleasure by the untiring work of our house secretary, Mrs. Helen Spencer, and I wish at the time to express to her my heartfelt thanks.

Now having given honor where it is due I wish to take up briefly some of the problems of our Society.

PROBLEM OF THE BRANCH SOCIETIES

Among the problems to the solved is that ot the various so-called "Independent Societies" such as the East Side, West Side, Highland Park, etc. We feel that the Wayne County Medical Society is the parent body, the truly respective branch of the National body, and its position should in no way be interfered with by these branch societies. While it is wholly desirable for the Branch Societies to increase in size and scope and so fill, in every way, the needs of their members, the bids for power which some of the branch organizations are making threaten to disrupt the parent Society and are therefore to be strenuously curbed if the welfare of the Wayne County Medical Society is to be guarded. It would seem that if we had a new building these societies could use it for their meetings, thus making the Wayne County Medical Society Building the nucleus around which all the medical activities of our city would revolve.

TIME OF MEETING

Then there is the question as to the changing of the night of meeting. This question arises because of the numerous branch societies having a multiplicity of meeting nights. This is a very important matter and a change should only be considered after a long and careful examination of all phases of the problem. It must be borne in mind that our meeting night can only be changed by a vote of the entire membership. We do not object so much to the changing of this night as we do to the other idea of having only two meetings a month. This would put the Society out of business. A committee has been appointed to work on this problem and we trust they will realize the great responsibility they have and act accordingly. The County Society, as a definitely established unit, should not be tampered with in any way but should be continually fortified by the combined efforts of every member to the end that it is afforded every facility for the proper carrying out of its plans.

DUTIES OF THE COUNTY SOCIETY

A Society such as ours has at least three important duties. These have often been stated, but we feel their repetition will not be amiss:

(1) Cultivation and advancement of the science of medicine.

(2) Promotion of the character and honor of the physician.

(3) Elevation of the standards of medical education.

Our programs during the past year as well as our efforts towards maintaining research facilities constitutes at least partial realization of the first goal. The second aim is to be realized only through the cognizance of every one of us of the importance of our positions in the community, and our honest attempts at giving always the best that is in us. The third duty as well requires the combined greatest efforts of every one of us for proper fulfillment. What is needed in these United States of America is a uniform law defining the Practice of Medicine —so that it will not be necessary every second year to have a Legislative Committee working day and night to watch for and prevent the passage of laws for the licensing of various groups that wish to enter the practice of medicine through the back door. At this time I wish to extend my sincere thanks to Doctor Loucks and his committee for the very efficient work done by them this past year. Unless one is interested, it is quite impossible to realize what goes on in the Legislative Halls during the Sessions. We owe more to this committee than our members have any idea of. It has meant real self-sacrificing work. This continuous guarding against legislative egorts to permit the cults to practice medicine shows the necessity of our co-operation with our parent Society, the American Medical Association, in its effort toward the attainment of a uniform Medical Practice Act.

EDUCATION OF THE PUBLIC

In order to obtain any such enactment of law as suggested above, it is necessary first that this great American public be educated. This is being done by Hygeia and the Gorgas Foundation in the country at large; locally, through our Beaumont lectures and the lectures given under the auspices of the Public Health Committee. (Under the able direction of Dr. Dempster, this committee has delivered lectures to thousands of lay people during the last year.) Education of the public is after all the most effective way of solving our problem. The searching light of publicity must shine down intot the dark places, and in doing this we should use all ethical means to give the right kind of medical knowledge to the public through the newspapers, magazines, lectures to the Parent-Teachers Associations, and by means of the greatest of all modern publicity agencies—the radio. The Society should have a committee from which these various publicity agencies could get definite and accurate information regarding medicine. We should be the ones to furnish the press with bona fide medical news and these agencies should cooperate with us to the extent that all medical news should be authoritative and of real value to the public.

CLINICAL BULLETIN

Among the worth-while things accomplished this last year we consider the publication of the "Clinical Bulletin" of distinct value in placing Detroit on the medical map. This Bulletin we hope will be developed to the point where it will mark the realization of one of our finest hopes: the establishment in Detroit—the Dynamic—of a real postgraduate school. The real solution will probably take some time—the only feasible means being some form of an endowment for the purpose, as well as the unstinted support of all the members. The Society is indebted to Dr. Alfred Whittaker and his committee for this long and arduous task in getting this Bulletin started. My sincere thanks go to them for this epoch in the affairs of our Society.

BEAUMONT LECTURES

Along the line of postgraduate work, the Beaumont Lecture series, through the able work of Doctors Davis and Donald and their committee, have placed before the Society some highly interesting speakers and material. We all enjoyed the talks of Doctors Mayo and Plummer on thyroid conditions, while Dr. Osgood's lectures on the history of Orthopaedics was singularly epoch-making. We trust that at least one or two evenings each year will be devoted to the historical side of medicine, since this, to my mind, is one of the most fascinating subjects in the whole realm of medicine.

PERIODIC HEALTH EXAMINATIONS

Ever intensely interested in Postgraduate Work, I feel that we as a profession are neglecting one very important phase of this work. We are allowing organized non-medical groups to do what we as physicians should do ourselves. The Life Extension Institute and others are doing the job because we are not. As part of my address, I am including the editorial by our Editor, Dr. Reveno, entitled "A Course in Physical Diagnosis Awaits Us at Home":

"A COURSE IN PHYSICAL DIAGNOSIS AWAITS US AT HOME

"A graduate course in Physical Diagnosis—a

course not to be equaled in value by those given at any of the colleges—is waiting for us right in our own offices every day. This course, which is to be carried out on those of our patients whom we can convince of the value of Periodic Health Examinations, offers, besides the opportunity to practice medicine constructively, an excellent occasion for all of us to brush up and learn to evaluate physical findings in the so-called well individuals. This is one of the phases of the practice of medicine which has failed of proper development because of our being too deeply engrossed in the treatment of those actually ailing; but because of our experience with the latter type of individual, the task of learning to evaluate and correlate normal or negative findings will be enhanced if we only proceed to apply ourselves to this very pressing job. This first hand study of Physical Diagnosis on our own clientele fill not only be remunerative to us, but will assuredly cost much less than a similar course obtained only after traveling long distances to popular clinics at great expense and loss of time. (We are not discounting the value of such practice, but we do want to encourage the cultivation of the facilities directly at hand.)

"A few of our members have been practicing pre-clinical medicine for some little time, and have gained many of the benefits resulting therefrom. A great many, however, have so far failed to avail themselves of opportunities offered by various agencies to become acquainted with this form of medical practice, and, as a result, are destined to become back numbers in the profession.

"By all that is right, the practice of pre-clinical medicine, or the periodic examination of the well, belongs to the medical profession. Our failure to avail ourselves of this opportunity to fulfill what is coming to be considered a necessary and wise procedure will result in other agencies taking this work from us. We've already had too much of this thing.

"Let's begin our course in Physical Diagnosis now."

NEW COMMITTEES

You have undoubtedly noted that a number of new committees have been appointed during the past year. I might say without qualification that all of these committees were appointed to perform or investigate definite non-hypothetical duties.

The first of these was the appointment of Dr. Emil Amberg as representative of the local Society on the city's Smoke Abatement Committee. The representation of the medical profession in such a group is a very necessary act, since the questions considered affect the public health directly.

WELFARE COMMITTEE

After careful consideration, the Council authorized the appointment of a group to be known as the Welfare Committee. This was the result of several unfortunate episodes in which it was found that cerain members of our Society were suffering from the want of the common necessities of life. I feel deeply regarding these matters and at this time wish to ask you all to report to this committee knowledge of any of our members who may be in need and yet be too proud to ask. Let us remember what the "Great Physician" said about helping one another.

RESEARCH COMMITTEE

As a result of a letter from Dr. S. Edward Sanderson, the Council approved the appointing of a committee to correlate information among our members regarding research work. It is proposed that the Committee endeavor to develop opportunities for those who desire to do research work. This is a step in the right direction. Suggestions to the Committee will be highly appreciated.

CRITICISM OF THE SOCIETY

During the year the old question of the senior members dominating the discussions was brought forward. As President, I have extended at every meeting night an invitation to one and all to take part in the discussions. If anyone has not done so it is his own fault and not that of the Society.

AMERICAN CONGRESS ON INTERNAL MEDICINE

The annual meeting of the American Congress on Internal Medicine and the American College of Physicians will be held in Detroit this coming year. From a knowledge of previous meetings of this organization I would request a cordial response to any requests made by the chairman of the committee on arrangements, Dr. C. G. Jennings. Detroit must not fall behind the other cities, either in scientific or social features. It means a lot of work, so let us all put our shoulders to wheel and show what medical Detroit can do.

CONCLUSIONS

We will succeed only by keeping our County Society as an efficient, united organization, with branches, yes—but as branches of a tree—all working for what the County Society stands for. The cultivation, elevation, and promotion to a higher and higher plane of the practice of medicine for its members and for the public at large and a close affiliation with the State Society and through that with the American Medical Association is highly desirable so that our united efforts will be directed towards the realization of the finer purposes of the practice of medicine.

REPORT OF A CASE OF SHOE DYE POISONING

S. A. SHELDON, M.D., Lt., (j.g.) M.C., U.S.N.R—V.
SAGINAW, MICHIGAN

The following case was observed during the annual cruise of the Saginaw Naval Reserve.

Bert R.—, a robust seaman, aged about 25, weighing 150 pounds, took his shoes to a repair shop, at 7 a. m., Monday morning, to have them dyed black. He called for them at 9:30 a. m. of the same day and wore them away. The day was very hot and he sweat copiously. About 1 p.m. his sister asked him what he had been eating as his lips were so "blue". He noted that at about the same time his head began to ache. He reported to the Naval Armory at 4 p.m., of the same day, prepared to go on the annual cruise. Shortly after 4 p. m., medical inspection was held and the man's extreme cyanosis was noted. Blood pressure, heart sounds, pulse rate, and hemoglobin were found to be free from any abnormality. He complained of headache, slight weakness, and some vertigo. Upon questioning, the fact that his shoes had been freshly dyed was brought out. He was ordered to wash his feet and change socks and shoes, which he did at once. The man was allowed to embark, but was put to bed upon arrival aboard ship. He was still extremely cyanotic and complaining of headache at 9 p. m. that evening. Next morning his headache had disappeared and in another twelve hours his cyanosis had. He reported "feeling good" from then on.

Inquiry at the shoe shop where his shoes were dyed, brought out that the dye used contained nitro-benzene. There was on the shoe dye bottle label, a warning not to wear freshly dyed shoes for at least 24 hours or until the dye was thoroughly dry. The patient says he received no warning.

PUBLIC HEALTH ACTIVITIES

Edited By

MICHIGAN DEPARTMENT OF HEALTH

TYPHOID FEVER IN MICHIGAN

Typhoid fever is rapidly decreasing in Michigan. It is not uncommon to hear a physician say that he almost never sees a case. Twenty-five years ago no clinician would have thought of making such a statement. Good water, pure milk and food supplies, and the detection of carriers have all contributed to the lessened prevalence of typhoid. The extent to which these protective measures have been utilized, and the prospects for further reduction deserve consideration.

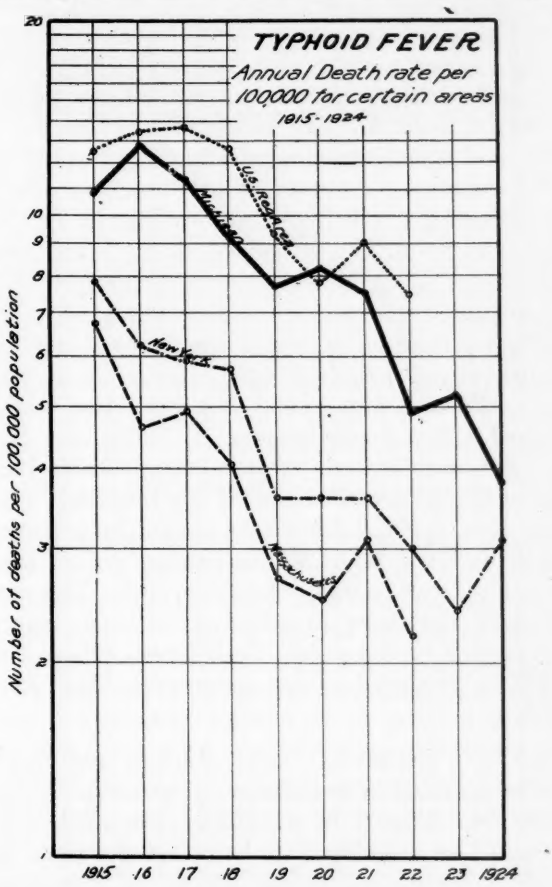
The mortality rates from typhoid fever for the United States Registration Area and the states of Michigan, New York and Massachusetts for the years 1915-1924 are shown in the following table and the accompanying graph. The death rates in the Registration Area and for Massachusetts are not available for 1923 and 1924.

TYPHOID FEVER ANNUAL DEATH RATES PER 100,000 IN CERTAIN AREAS, 1915-1924

Year	United States Registration Area	Michigan	New York	Massachusetts
1915	12.4	10.9	7.8	6.8
1916	13.3	12.8	6.2	4.7
1917	13.5	11.3	5.9	4.9
1918	12.6	9.2	5.7	4.1
1919	9.2	7.7	3.6	2.7
1920	7.8	8.1	3.6	2.5
1921	9.0	7.5	3.6	3.1
1922	7.5	4.9	3.0	2.2
1923	.....	5.2	2.4	....
1924	.....	3.8	3.1	....

Michigan's typhoid fever death rate is falling more rapidly than that of either of the other two states—a gratifying, but after all not an especially laudatory observation. Geographically all three commonwealths are in about the same latitude, and there are no remarkable differences in heredity or environment among the people who live in them. Notwithstanding these fairly close resemblances which make the three favorable groups for comparison, the New York and Massachusetts rates are lower in each of the ten years than our own. We are now approaching, but have not yet achieved, the low mortality of two eastern states whose inhabitants have understood typhoid fever prevention more thoroughly, and practiced it more consistently and for a longer period of time than Michigan.

The Registration Area includes thirty-seven states and certain cities, covering 85 per cent of the population of the United States. Several of these units are in climates where typhoid fever is endemic the year around, and where the problems of water supply and sewage disposal are a great deal harder to solve than our own. In some of the other states not very much public health work has been done. As



compared with the Registration Area, Michigan's typhoid fever death rate is more encouraging. Our rate has been lower each year and is falling more rapidly than that of the Registration Area. Typhoid fever is axiomatically the infection whose prevalence depends upon the development of the community's sanitary conscience, and education in the control of communicable diseases. Apparently, Michigan has gained more ground in this direction than the country as a whole.

Bettering the average for most of the United States is not the ideal, nor is reducing our typhoid fever mortality rate to the level of New York and Massachusetts sufficient. This disease is absolutely preventable, and infallible measures for its elimination are at everyone's disposal. Michigan should cease having any

typhoid fever deaths. As a matter of fact, 149 persons died from typhoid fever in 1924, an indication that there is still a great deal to do. This year's records do not promise to be any more favorable. As examples of situations which occur often and needlessly, your attention is invited to a review of two recent Michigan outbreaks.

In August, nine persons became ill with typhoid fever at almost the same time. They lived in a city where the water supply is above suspicion. They had not attended any picnic, or large public gathering. Nor was it found that they used butter, cheese or green vegetables from a common source of supply. All of the patients did patronize the same dairy. One of them, a child, visited in the city for a day and was given this variety of milk only on that occasion. Another patient bought a single bottle of the milk to drink—ordinarily he did not buy from the suspected dairy. The employes of the dairy were all questioned. Widals done and specimens of feces examined. The results were negative, but it was learned that an itinerant worker had been employed at the dairy for a short period—just about two weeks before the patients became ill. This man has not yet been located, but it is very probably that he is the carrier who caused the outbreak. At any rate, typhoid fever was spread by infected milk and the point to be emphasized is that this milk supply was not pasteurized. The city allowed the dairy to sell raw milk—a source of danger to the public health even where the milk is produced under supposedly ideal conditions.

Osler's dictum of "food, fingers, and flies" comes to mind in describing an epidemic during July and August in an Upper Peninsula village. The working population of the town is almost exclusively in the service of a lumber company. A great many of the residents are foreign born, and the community always includes many transients—"floaters" who go from one lumber camp to another. There is no municipal water supply, or no system of sewage disposal. Water comes from shallow wells, often located so that the sewage from the privy must drain down the slope into the well. Ninety per cent of the wells were found to be grossly contaminated. Screening is not very common in spite of the large numbers of flies. The disposal of garbage and refuse is left entirely to the individual citizen's conscience. Most of these people keep their own cow, a few buy milk from a neighbor and others use condensed milk only.

There have been ten cases of typhoid fever, and eleven cases of a condition described as "bloody diarrhea" in the village this summer. A detailed investigation of the epidemic failed to reveal any individual carrier, or any one source of infection. Typhoid fever might have been spread in so many ways that one could not determine by which method transmission had actually taken place. The investigator began a series of typhoid-paratyphoid inoculations on all the population of the village who would accept this protection—that being the only method for controlling the situation while the exact cause remains a mystery. It goes without saying that the village will continue to have cases of typhoid as long as it remains, from a sanitary viewpoint, one of the state's most disreputable communities. Under such conditions, a single carrier may do an enormous amount of harm.

The two 1925 outbreaks reviewed are typical. Similar occurrences might happen in a number of Michigan cities, villages and townships. There are large communities who use carelessly supervised raw milk supplies. Safe drinking water has not been universally provided, and there are other villages quite as unsanitary as the one which has been described. In other words, the elimination of typhoid is not an accomplished feat of preventive medicine.

The physicians of the state can do more than any other group of individuals toward remedying the situation, because while such technical matters as water supply and sewage disposal systems are the function of engineers, it is the physician who has at his command the ultimate source of new cases. The doctor prescribes for the patient and has the opportunity of keeping that patient under supervision as long as the safety of the public requires. No new case of typhoid is possible except by the ingestion of typhoid bacilli, and typhoid bacilli can be acquired only (directly or indirectly) from the fecal matter of another case or a carrier.

The first and the most important step in typhoid control for the physician must be the careful observance of the rule requiring two negative specimens of feces taken at weekly intervals before the patient is released. Universal adherence to this regulation, together with eliminating possibilities for the wholesale transmission of the disease by milk, food and water would entirely wipe out Michigan's typhoid mortality. —G. H. R.

PROTECTING ROADSIDE WATER SUPPLIES

The Michigan Department of Health has realized for some time that an important pub-

lic health problem is presented by the water supplies likely to be used by highway travelers. The supplies causing anxiety are those prominent enough along the line of automobile routes to tempt travelers to use them for drinking purposes, such as those at hotels, automobile camps, summer resorts, gasoline filling stations, roadside lunch stands, and schools.

The published results of investigation of roadside water supplies in Pennsylvania during the summer of 1924 gave an idea of the small percentage of such supplies which might be expected to prove safe in Michigan. Fortunately for the traveling public, our results were more favorable than those in Pennsylvania.

When it had been decided to undertake a program for the protection of roadside water supplies, considerable thought was given to the advisability of marking all the sources examined, both safe and unsafe, according to the decision reached on the basis of a field inspection and laboratory analysis. It was finally decided that it would be best to mark with the unsafe sign only those drinking places which were manifestly unsafe and to advertise along the roadways the desirability of care on the part of the tourists in choosing a source of drinking water marked with a safety sign. For this purpose a sign 14 inches by 27 inches was prepared which is reproduced in Figure 1. These are intended to be erected along the principal highways at prominent points about five miles apart.

FIG. 1

The supplies found to be safe for drinking purposes were marked by the sign, Figure 2,

FIG. 2

7½ inches by 14 inches. These two signs are made of sheet iron and enameled in the colors corresponding to the 1925 license plates, black letters on light gray background. Figure 5 shows the marker for unsafe supplies, which is the same size as the safe sign but is made with white letters on red background.

FIG. 3

Due to delay in arranging appropriation and obtaining equipment, the work was not started until July 17th. The last sample was collected on September 11th. In order to make this work of the greatest value it should be started as early in the spring as possible, probably about the first of May, and it should be carried on only as rapidly as is consistent with service.

The method of doing work was as follows:

An automobile was provided large enough to carry a supply of sample bottles sufficient to last several days, the necessary material for packing and shipping the samples, a small refrigerator, as well as the miscellaneous baggage necessary for a somewhat extended automobile trip. Two men were used in this car during this season's work, but it is doubtful if two are necessary. No traveling laboratory being available, and fairly prompt and reliable mail service being assured, it was decided to ship the samples to Lansing each day. It was usually necessary to discontinue taking samples a little past the middle of the afternoon in order to reach a mailing point in time to properly pack the bottles and see that they were put on the train.

Considerable care was necessary in ascertaining the time of departure of mail because the information on this subject usually obtained relates to first class mail, and not all of these mails included parcel post. For shipping, paper cartons in the knock-down form were carried in the car and enough corrugated paper to wrap around each bottle. Out of over 402 samples, two in the first shipment leaked out and one was broken later. The packages were mailed the latter part of the day so as to take advantage of the coolness of night travel. Dur-

ing the day the samples were kept in the home-made box in which a little ice could be carried if necessary.

Blanks were provided for a complete description of the source of each sample, with a place for the laboratory results to be entered. These sheets were filled out in duplicate for each sample. The original copies for the day's work were mailed first class to the laboratory at the same time the samples were sent by parcel post. The copies were retained as a guard against loss in the mail and for further use in the office of the Bureau of Engineering.

Each sample was given a serial number and the sampling points were spotted on county maps which were drawn to a scale of about three-fourths inches to the mile. The number and description of the source was also placed on the map beside the spot. This was for a permanent record and to enable the person who followed to identify the source for marking.

A second car followed about two weeks behind the first one. This gave time enough for the samples to go through the laboratory and for a sufficient number to be reported at one time to prevent any break in the work of the follow-up man. In the meantime a written report was sent to the owner of the supply giving the decision as either safe or unsafe. When the second man arrived he asked to see the letter. This gave him a check on the identification of the sampling point and enabled him to check with the owner's report and observe his attitude toward the work. It proved to be important that the follow-up man be a sanitary engineer or at least a person having considerable experience in water supplies and acquaintance with laboratory methods, since it is his duty to visit all points where water samples are collected and talk with the owners, explaining to them what the state is trying to do and advising them to make whatever improvements seem desirable.

Many persons who received unsafe reports failed to realize their significance. Some were found who could scarcely read the English language and many did not take the situation very seriously and consequently did nothing to make any change.

Four hundred and twenty-five samples were taken, of which 269 were finally decided to be safe, and 157 unsafe. The per cent of safe samples, therefore, was 63.3 per cent. A complete study of the results has not yet been made and no comprehensive summary is yet possible.

—E. D. R.

PREVALENCE OF DISEASE

September Report—Cases Reported

	August 1925	Sept. 1925	Sept. 1924	Average
Pneumonia	137	185	143	156
Tuberculosis	247	632	405	426
Typhoid Fever	114	153	117	194
Diphtheria	200	225	334	622
Whooping Cough	788	652	453	405
Scarlet Fever	269	353	489	529
Measles	109	70	148	112
Smallpox	30	17	44	66
Meningitis	5	9	10	9
Poliomyelitis	11	19	285	47
Syphilis	1128	1444	1302	875
Gonorrhea	801	1142	1250	1061
Chancroid	8	16	11	14

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health

September, 1925

	+	—	+—	Total
Throat Swabs for Diphtheria	.....	.....	....	2523
Diagnosis	37	332	....	.....
Release	78	180	....	.....
Carrier	5	1853	....	.....
Virulence Tests	11	27	....	.....
Throat Swabs for Hemolytic Streptococci	.....	.....	....	601
Diagnosis	211	156	....	.....
Carrier	23	211	....	.....
Throat Swabs for Vincent's	45	322	....	367
Syphilis	.....	.....	....	10947
Wassermann	869	4627	67	.....
Kahn	978	4367	39	.....
Darkfield	.....	.....	....	.....
Examinations for Gonococci	227	1941	....	2168
B. Tuberculosis	.....	.....	....	365
Sputum	101	255	....	.....
Animal Inoculations	1	8	....	.....
Typhoid	.....	.....	....	323
Feces (Includes Brightmoor Survey)	26	156	....	.....
Blood Cultures	3	40	....	.....
Urine	1	5	....	.....
Widal	32	60	....	.....
Dysentery, Inc. Brightmoor Survey	.....	.....	....	131
Intestinal Parasites (Includes Brightmoor Survey)	.....	.....	....	25
Transudates and Exudates	.....	.....	....	362
Blood Examinations (not classified)	.....	.....	....	397
Urine Examinations (not classified)	.....	.....	....	661
Water and Sewage Examinations	.....	.....	....	817
Milk Examinations	.....	.....	....	53
Toxicological Examinations	.....	.....	....	4
Autogenous Vaccines	.....	.....	....	15
Supplementary Examinations	.....	.....	....	498
Unclassified Examinations	.....	.....	....	242
Total for the Month	.....	.....	....	20499
Cumulative Total (Fiscal year)	.....	.....	....	57500
Increase over this month last year	.....	.....	....	2433
Outfits Mailed Out	.....	.....	....	19991
Media Manufactured, c.c.	.....	.....	....	583460
Diphtheria Antitoxin Distributed, units	.....	.....	....	18697000
Toxin-Antitoxin Distributed, c.c.	.....	.....	....	25370
Typhoid Vaccine Distributed, c.c.	.....	.....	....	1761
Silver Nitrate Ampules Distributed	.....	.....	....	3688
Examinations Made by Houghton Laboratory	.....	.....	....	1564

The Journal
OF THE
Michigan State Medical Society
ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

PUBLICATION COMMITTEE
R. C. Stone, Chairman.....Battle Creek
C. D. Darling.....Ann Arbor
J. D. Bruce.....Saginaw

Editor and Business Manager
FREDERICK C. WARNSHUIS, M. D., D. Sc., F. A. C. S.
Grand Rapids, Michigan

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The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—$5 per year, in advance

NOVEMBER, 1925

Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Michigan.

Editorials

NEWLY ELECTED COUNCILLORS

At our annual meeting in Muskegon, three changes were made in the personnel of our Council. Inasmuch as our Council is the executive body of our society, carrying out the wishes of our members and the instructions of the House of Delegates, it is a matter of interest and of concern that our members should have intimate acquaintance with the fourteen members who comprise the Council. We are therefore imparting a short sketch of the lives of the new members.

J. HAMILTON CHARTERS, M. D., DISTRICT COUNCILOR OF 1ST DISTRICT

Dr. Charters succeeds Dr. Frank Walker, who has served one term and who has ever manifested keen interest in our society affairs.

Dr. Charters was born in Bay City, Mich., Sept. 6, 1879, attended Bay City schools and finished high school there, graduated in medicine from S. V. M. C. in 1906. Located at Gaylord, Mich. In 1908, he went to Chicago and took three years' post-graduate work in surgery and gynecology, from then on acting as assistant surgeon until 1915, when he located in Houghton, Mich. He practiced there for a short time, enlisted in medical corp of the U. S. A. and received a commission as first lieutenant. After close of war he was promoted to captain of the O. R. C., which rank he still holds. In 1919 he located in Detroit, limiting his practice to surgery and gynecology, and soon after became actively interested in the Wayne County Medical Society, having always been interested in Medical Society work, having become a member of the Michigan State Medical Society and the A. M. A. in 1904.

J. Hamilton Charters

He is a member, in good standing, of the following organizations:

American Medical Association, Michigan State Medical Society, Wayne County Medical Society, Companion of Military Order of Sovereign Wars, Members of Officers' Reserve Corp, Member of Association of Military Surgeons, Charter Member of Army and Navy Club of Detroit, Member of Detroit Museum of Art Founders Society, Member of Y. M. C. A., Member of Detroit Auto Club, Member of Palestine Lodge, F. and A. M., No. 357, Detroit; Member of Palestine Chapter, R. A. M., No. 159, Detroit; Member of Eastern Lodge, I. O. O. F., No. 887, Detroit. Also holds commission as deputy sheriff of Wayne county.

It is confidently to be expected that Dr. Charters, by reason of his youth (46 years) and medical interests, will contribute much that is constructive for the continued activity of our Society in its service to the members.

JULIUS H. POWERS, M. D., SAGINAW, COUNCILOR 8TH DISTRICT

With Dr. Bruce's removal to Ann Arbor, there occurred a vacancy in the office of the Councillor of the 8th District. By the authority invested in him President Darling has appointed Julius H. Powers of Saginaw to fill the unexpired term of Dr. Bruce, and will serve until 1927.

Dr. Powers was born in New Hampton, Iowa, in 1880. He graduated from high school in 1897, from Iowa College Academy in 1898, Ph. B. from Iowa College in 1901, and one summer study at Marine Biology Laboratory at Wood Hall, Mass. Instructor in biology at Iowa College during 1901 and 1902. Received his A.M. from Iowa College in 1903 and graduated in medicine from University of Michigan in 1906, serving one year on surgical staff under Dr. de Nancrede. He has practiced in Saginaw ever since, excepting eighteen months' army service, six months of which was in France.

Julius H. Powers

It is readily apparent that Dr. Powers will fill the office and that under his direction the 8th District and the State Society will have an able and efficient Councillor.

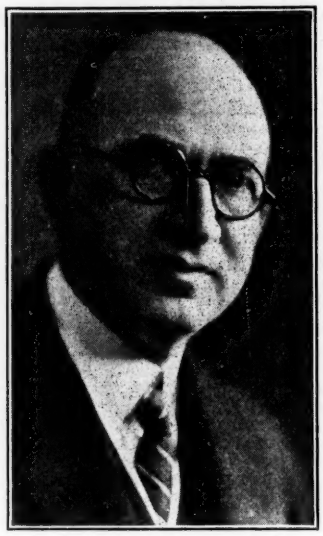
JAMES D. BRUCE, M. D., ANN ARBOR
COUNCILOR 14TH DISTRICT

With his election as President, the office of Councillor of the 14th District, held by Dr. C. G. Darling, became vacant. President Darling appointed Dr. J. D. Bruce to this vacancy and he will serve until 1929.

Dr. Bruce needs no introduction. We append the following tabloid of his professional life.

Graduated from Detroit College of Medicine in 1896. Did country practice 1896-1904. Was in service of Dr. George Dock, University Hospital 1904-1905. Began practice in Saginaw, Mich., in 1906. 1916-1917—August to March, Canadian Army Medical Corps, Base Hospital in England. From 1917-1919, resigned British commission and accepted commission in Medical Corps, U. S. A., serving at Base Hospital No. 6, Fort MacPherson, Ga., five months; Liverpool, England, one month, and May, 1918, to February, 1919, Evacuation Hospital No. 5, France. Director of Surgical Service.

1920—Fellowship American College of Surgeons.



James D. Bruce

1921—President Saginaw County Medical Society.

1922—Elected to Council, Michigan State Medical Society, representing 8th District.

1924—Entered service of University of Michigan as Director of Department of Internal Medicine and Chief of Medical Service, University Hospital.

We, as a Society, are thus fortunate in retaining Dr. Bruce upon the Council and have the assurance that in his official capacity and as a member our interests are vested in a capable officer.

CLINICAL CONFERENCES

Dr. J. B. Jackson: It is not my purpose to take up much time this morning in reviewing the program of district conferences which has been carried on since our last annual meeting. Most of you have attended one or more of these conferences and are familiar with the general plan.

At the last annual meeting, the plan of holding all day programs in each Councillor district was proposed. It was planned to present at these meetings a high grade scientific program to the members of the district. Sixteen such conferences have been held, twelve in the lower peninsula, and four in the upper peninsula.

The general purpose has been to bring to the men in general practice the latest and best things in the science of medicine. The programs have consisted of practical presentations of subjects of general interest rather than the reading of formal papers. The ideal before us

has been to elevate the standards of medical practice.

At most of these conferences there has been a forenoon and afternoon program, with a noonday luncheon. This noonday luncheon has served the purpose of promoting good-fellowship and the increasing of interest in County Society organizations and the work of our State Society.

How well we have succeeded is for you to judge. From reports received from the membership of the different districts, we believe that the conferences have been exceedingly profitable to our members and have markedly increased interest in our County and State organizations. At these sixteen conferences nearly 1,000 physicians have been in attendance.

The present program for this annual meeting was arranged to carry out the same general plan. The scientific committees of the various sections decided to try out a program of practical talks by national leaders in the various branches of medicine, rather than the presentation of formal papers at the various sections. We are very proud of the program which has been arranged. We have a two-day program which should be of interest to every doctor in the State of Michigan.

In conclusion, let me say that the Council invites criticisms and suggestions. This is your society and it is for your benefit. If you can suggest how these post-graduate conferences and our annual meeting can be made more profitable and interesting, we hope you will do so. If we will all work together in an effort to become better men and better equipped to minister to the sick, we can deserve in an increasing degree the confidence and approbation of the public whom we serve.

(Statement by J. B. Jackson, Chairman of the Council at Annual Meeting.)

HYGEIA

Our House of Delegates at the Muskegon meeting adopted the following resolution:

Whereas, The difficulty that obstructs greater conservation of human lives and limits man's longevity is the lack of instruction and the absence of greater receipt of reliable scientific information by the people in regard to the laws of health and prevention of disease, and

Whereas, It is the unquestioned duty of the profession to employ every honorable and dignified means to increase the dissemination of reliable scientific medical knowledge and instruction, and

Whereas, An important and effective means is available in the publication, Hygeia, edited and distributed by our parent national body, the A.M.A.; therefore, be it

Resolved, By the Michigan State Medical Society,

First, that we commend to and urge our members unstinted support to this educational magazine by means of

(a) Personal subscription and maintenance of each copy upon their reception room table.
(b) Calling the attention of their patrons to the value of this magazine.
(c) Causing steps to be taken so that local reading rooms and clubs will place Hygeia upon their reading tables.
(e) Interesting school teachers and the clergy so that they may aid in creating a wider circulation of Hygeia.

Second, that when in our power to so do, we will cause the attention of local newspaper editors to be directed to each issue with the request that articles be reprinted and thereby causing greater dissemination of reliable information to the public. Be it further

Resolved, That we commend the officers of A. M.A. in their labors to supply such a publication as Hygeia and approve the monetary investment that is being made for that purpose.

Officers of County Societies and individual members are invited to observe this recommendation. Hygeia will serve you if you but give it your support. Subscriptions should be sent to Business Manager, A. M. A., 535 N. Dearborn street, Chicago, Ill.

COMMITTEE APPOINTMENTS

President Darling has made the following appointments for vacancies on our Standing Committees. It is our President's desire that these committees shall become immediately active in undertaking their duties and assignments.

COMMITTEE ON PUBLIC HEALTH
John A. Wessinger ..... Ann Arbor

LEGISLATION AND PUBLIC POLICY
Wm. C. McCutcheon ..... Cassopolis

TUBERCULOSIS
Bruce H. Douglas ..... Northville

VENEREAL
Udo J. Wile ..... Ann Arbor

MEDICAL EDUCATION
A. P. Biddle ..... Detroit

CIVIC AND INDUSTRIAL RELATIONS
L. A. Farnham ..... Pontiac

JOINT COMMITTEE ON NURSING EDUCATION
C. E. Boys ..... Kalamazoo
Wm. K. West ..... Painesdale
Frank C. Witter ..... Detroit
J. G. R. Manwaring ..... Flint
F. W. Garber, Sr. ..... Muskegon

STANDARDIZATION OF INSURANCE REPORT BLANKS
Grover C. Penberthy ..... Detroit
E. I. Carr ..... Lansing
T. F. Heavenrich ..... Port Huron
C. T. Southworth ..... Monroe
G. W. Stockwell ..... Detroit

JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION
A. P. Biddle ..... Detroit

SPEAKER KING'S ADDRESS

Gentlemen:

I do not propose to bore you with a long address at this time. I have in mind a few

thoughts which I believe would be of benefit, both to the medical profession, and to the laity.

First, I am of the opinion that the medical profession of the State of Michigan should show more enthusiasm in regard to obtaining every eligible physician as a member of our State Society.

Secondly, I believe that our state organization should take a lesson from the legal profession, which absolutely controls all legal matters.

Thirdly, I believe that we should have some legal regulation which would make it obligatory on the part of every physician aspiring to a specialty, to practice general medicine for a definite number of years, taking a special course, and passing a special examination.

Fourth, I believe that we should have some changes in the training of nurses, which would make it possible for the people of moderate means to obtain the services of a nurse at a reasonable rate. In other words, nurses could be divided into two classes, those with special training, and those with limited training. The former to be utilized in hospitals, etc., where special training is necessary, whereas the second class could be utilized in the home where simple nursing is all that is required.

Fifth, and lastly, I believe that the regulations and laws governing the practice of medicine should be left entirely to the medical profession.

MEDICAL ADVERTISING AND PUBLICITY

This is a subject that has long been a debated one amongst ourselves and the public. We have never really taken an out and out stand. In recent years we have shunned serious consideration and have permitted an idle attitude to reflect our position. Events forecast that the time is approaching when we can no longer ignore the issue or the principles involved. A solution and a policy will be demanded from us. We are therefore presenting for our members' information and consideration the following editorial from the Texas State Medical Journal. We congratulate the State of Texas for its progressiveness and for the commendable spirit in which the profession is solving this problem. Michigan will profit thereby and should be inspired to pursue a similar campaign.

ADVERTISING THE MEDICAL PROFESSION

Last month we discussed the law enforcement campaign, then just getting under good headway. It will be remembered that the State Medical Association is participating in this movement upon the earnest and repeated request of the State Board of Medical Examiners, and because the Medical Practice Act itself is a child of the Association, as originally passed and later amended. The interest of the medical profession in this law is incident to the fact that through it alone can the public be protected against ignorance in the sick room, with the attendant damage to life and health, the which even the physician with all of his intimate experience in such matters, can hardly appreciate.

We are pleased to report at this time that none of the impetus achieved in the beginning of this campaign has been lost; indeed, there has been a pleasing increase in vigor of action, and a constantly increasing list of successes with a constant decrease in the number of failures. It has been now determined definitely and beyond a doubt, that courts and juries are willing to convict and that public sentiment is overwhelmingly in favor of enforcing this most beneficial law. As pointed out, the cause of failure has been largely the indifference of the public, and the prevailing idea among the enforcement officers and the courts, that the whole affair was a contest between schools of medicine, and that no matter how worthy the law may be its enforcement was impracticable. In addition to these handicaps, indictments have frequently been insufficient and prosecution without force and without proper conception of what the State is endeavoring to do.

Last year the State Medical Association conducted a determined and forceful campaign of education on the general subject of the practice of medicine, with the idea that should the lay public once understand the situation the professional life of the quack and the medical impostor would be short, and scientific medicine would be in a position to render to the public such service as the public has never dreamed of. Those of us who had been observing this movement closely were of the opinion that a safe foundation had been laid for future effort, which was about all that could be honed for in a single season. It seems that our confidence is about to be justified. As the law enforcement campaign progresses it is found that progress is increasingly easy, particularly where the seed of publicity was planted last year. Not the least encouraging item in this connection is the response of our own members. Where our previous publicity plans were looked upon with suspicion, frequently we find the profession most ready to engage in further publicity endeavors in support of the law enforcement campaign, and where this is done, almost invariably there is success in the prosecution of violators of the Medical Practice Act. Verily, the proof of the pudding is in chewing the bag.

The relationship of the medical profession to the lay press has long been strained. On the one hand we have suspected the press of a willingness to participate in crime for the profit, and on the other, the press has felt that the medical profession was posing as an institution too holy to join in the universal advertising campaigns of modern times. As a profession, we have resented the appearance in the press of misleading quack and patent medicine advertisements, which have frequently been not only offensive from an aesthetic standpoint, but most potent for harm. The press has pointed to the desire of the physician for free advertising, and has believed him to be insincere when he protested. The privilege of inserting professional cards in the lay press, granted by the principles of medical ethics, has more often than otherwise been ignored. In most communities it is still deemed unprofessional to allow any sort of newspaper publicity, paid or free. The layman, not appreciating the need of our splendid code of professional ethics, is slow to get the difference between advertising a commodity and advertising personal skill. In the one instance it will be read-

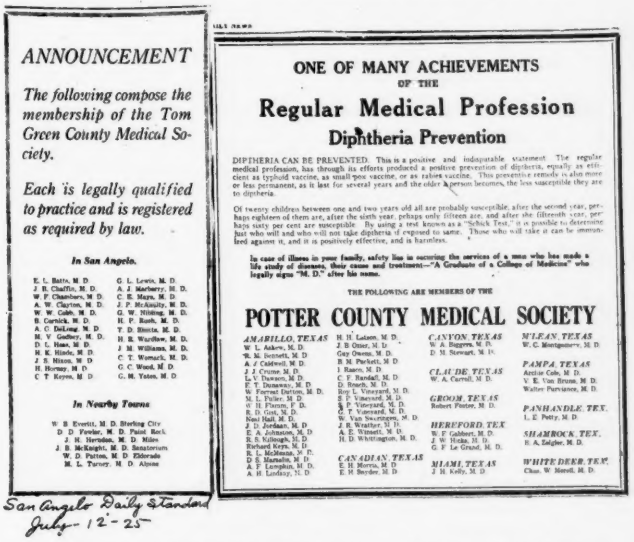
ily appreciated that the buyer can well afford to beware, whereas in the other instance the buyer has no opportunity in the world to determine in advance what it is he is purchasing. There is no easy way to decide between the individual who claims great skill for himself and does not have it and the one who claims to be superior in his field of endeavor and is. We have justly concluded, therefore, that there is no feasible and honorable way to advertise the individual in the practice of medicine. This conclusion seemed to definitely outlaw advertising.

Then came the conception that the profession might advertise itself as a whole and not the individual engaged in practice. In other words, physicians might join in paying for the distribution to the public of knowledge concerning scientific medicine, and extol the advantages to accrue from the employment of those who are informed, and the harm to come from employing those who are not informed. Objection to this idea was immediate and emphatic, but based rather on the discredit that had come to this character of advertising through its practice by the faker and the quack, than on principle. And so the matter stood for some years, until it became quite evident that the medical profession owed it not so much to itself as to the public, to insure the distribution of needed information. The quack and the practitioner of weird and peculiar systems of medicine were administering their propaganda to the people in large doses, all of which was being paid for as advertising. The people were being misinformed and misled. It would not do to accuse the press of being contributors to the injury of their readers through this sort of propaganda, and there seemed to be no feasible method of placing the facts before the public through contributed articles. Our experience in advertising our publicity campaign last year led inevitably to the conclusion that if we are to be successful in getting the people on the right track as pertains to the practice of medicine, we must approach them through the medium of the paid advertisement, coupled with such scientific articles as the press can find room to publish. The people expect it and the newspapers expect it.

With this thought in mind, the Executive Council of the State Medical Association authorized a modified plan of publicity which was, notwithstanding, a radical departure from the conservative policies of the past in regard to such matters. The idea is very simple—to permit and encourage, the advertising of the medical profession as a whole, its accomplishments in the past, competency for the present and its hopes for the future. It does not authorize publicity for the individual, except to the extent that the individual is shown to be a member of his County Medical Society and authorized by law to practice medicine. The right of the individual to inform the public through the medium of paid advertising, of the fact that he is practicing medicine, the kind of medicine he is practicing and where he may be found, is undisturbed, and is still within the control of the local group. It was felt that the press would react most kindly to the decision on the part of the medical profession to help pay the cost of distributing such desirable information, and would be inclined, in many instances, to deny advertising space to the quack; certainly to the unlicensed quack. President Dr. Rosser took this thought direct to the Press Association of the State, in an able and logical discussion of the subject. This contribution was received with astonishment and incredulity, in about equal proportions, and the comments have been variously of approval and disapproval, praise and sarcasm. But many of the papers had been won over, and many doctors had come to see the necessity of the new order of things. And for fear that we may be misunderstood, let us repeat, no principle of medical ethics as it applies to publicity for the individual will be violated in the new policy of publicity as applied to the medical profession in its connection with the health of the public.

THE ROSTER PUBLICITY PLAN

Having decided that it is right and proper to approach the public in the interest of scientific medicine and the medical profession, through the medium of paid advertisements, it remains but to decide the form and character of the ads, and what phase of our great problem shall be stressed at any particular time. Just now, when the public is being told that it is dangerous to patronize ignorant practitioners, and that the only known means at hand for determining who are qualified is the Medical Practice Act of this State, it would seem a good plan to say something about this law, its necessity, fairness and comprehensiveness, and how the public may know who of those offering their services have stood the test prescribed therein. At other times, other subjects may well be discussed, such as diphtheria and the respiratory diseases in general, during the winter, and typhoid and malaria in the summer. Any subject which will give an opportunity to impress upon the reader some helpful fact peculiar to scientific medicine, will do. Then should follow the list of the County Society membership, with the statement that each member has been licensed to practice medicine in the State of Texas. The presumption is that each individual who has stood this test is at least basically qualified to practice medicine. There should be no contention as to the actual skill and ability of any or all of those mentioned. In other words, as it is not considered genteel and ethical to stress the personal ability of the individual, so it cannot be proper to emphasize the same qualities in the group. It is quite sufficient to impress upon the reading public that those being advertised have stood the test, and, by interference, are ethical practitioners of medicine. There should be nothing to lead to the inference that all practitioners of medicine whose names are not included are ignorant



ANNOUNCEMENT

The following compose the membership of the Tom Green County Medical Society.

Each is legally qualified to practice and is registered as required by law.

In San Angelo.

E. L. Batts, M. D. — G. L. Lewis, M. D.
J. R. Chaffin, M. D. — A. J. Marberry, M. D.
W. F. Chambers, M. D. — C. E. Mayo, M. D.
A. W. Clayton, M. D. — J. P. McAnally, M. D.
W. W. Cobb, M. D. — G. W. Nibling, M. D.
B. Cornick, M. D. — H. F. Rush, M. D.
A. C. DeLong, M. D. — T. D. Shiels, M. D.
H. V. Godbey, M. D. — H. R. Wardlow, M. D.
D. L. Hass, M. D. — J. M. Williams, M. D.
H. K. Hinds, M. D. — C. T. Womack, M. D.
J. S. Hixon, M. D. — G. C. Wood, M. D.
H. Horney, M. D. — G. M. Yates, M. D.
C. T. Keyes, M. D.

In Nearby Towns

W. B. Everitt, M. D. Sterling City
D. D. Fowler, M. D. Paint Rock
J. H. Herndon, M. D. Miles
J. B. McKnight, M. D. Sanatorium
W. D. Patton, M. D. Eldorado
M. L. Turney, M. D. Alpine

ONE OF MANY ACHIEVEMENTS
OF THE
Regular Medical Profession
Diphtheria Prevention

DIPTHERIA CAN BE PREVENTED. This is a positive and indisputable statement. The regular medical profession, has through its efforts produced a positive prevention of diptheria, equally as efficient as typhoid vaccine, as small pox vaccine, or as rabies vaccine. This preventive remedy is also more or less permanent, as it last for several years and the older a person becomes, the less susceptible they are to diptheria.

Of twenty children between one and two years old all are probably susceptible, after the second year, perhaps eighteen of them are, after the sixth year, perhaps only fifteen are, and after she fifteenth year, perhaps sixty per cent are susceptible. By using a test known as a "Schick Test," it is possible to determine just who will and who will not take diptheria if exposed to same. Those who will take it can be immunized against it, and it is positively effective, and is harmless.

In case of illness in your family, safety lies in securing the services of a man who has made a life study of diseases, their cause and treatment—"A Graduate of a College of Medicine" who legally signs "M. D." after his name.

THE FOLLOWING ARE MEMBERS OF THE

POTTER COUNTY MEDICAL SOCIETY

AMARILLO, TEXAS
H. H. Latsen, M. D.
J. B. Greer, M. D.
Guy Owens, M. D.
B. M. Parkett, M. D.
I. Raess, M. D.
C. F. Randall, M. D.
D. Roach, M. D.
Roy L. Vineyard, M. D.
S. P. Vineyard, M. D.
R. P. Vineyard, M. D.
W. Van Swearingen, M. D.
J. R. Weather, M. D.
A. E. Wimmell, M. D.
H. D. Whittington, M. D.

CANYON, TEXAS
W. A. Biggers, M. D.
D. M. Stewart, M. D.

CLAUDE, TEXAS
W. A. Carroll, M. D.

GROOM, TEXAS
Robert Foster, M. D.

HEREFORD, TEX
W. F. Gabbert, M. D.
J. W. Hicks, M. D.
G. F. Le Grand, M. D.

MIAMI, TEXAS
J. H. Kelly, M. D.

M'LEAN, TEXAS
W. C. Montgomery, M. D.

PAMPA, TEXAS
Antlie Cole, M. D.
V. E. Van Brunt, M. D.
Walter Purviance, M. D.

PANHANDLE, TEX.
L. E. Petty, M. D.

SHAMROCK, TEX.
H. A. Zeigler, M. D.

WHITE DEER, TEX.
Chas. W. Hassell, M. D.

San Angelo Daily Standard
July 12-25

Fig. 1 A facsimile of a group of newspaper advertisements paid for by County Medical Societies. Note that the ad of the Potter County Medical Society does not state that the doctors whose names appear in their roster are licensed practitioners of medicine. This statement is important and should appear in such ads.

or lacking in any number of particulars. The conclusion will be, of course, that there are such, which should lead to a close scrutiny of the qualifications of the individual whose name is not included in the list. It is not an effort to boycott or exclude from consideration, those physicians who are not members of our organization. Indeed, there are many qualified practitioners of medicine who are not members, but who are in every particular qualified to become members, and there are honorable practitioners of the so-called minor schools who are authorized by law to practice and who are believed to be capable, but who, because of their sectarian practices may not become members of our County Societies.

An important matter to be borne in mind is, that it is exceedingly hazardous and of questionable value to participate in a newspaper controversy with the quack. For the present moment, at least, our executive council is rather insistent that this be not done. The public is inclined to look upon the effort to encorce the Medical Practice Act as a contest between so-called schools of medicine, which it distinctly is not, of course. A controversy with an advertising follower of some cult or sect who is being prosecuted for violating the Medical Practice Act, lends dignity to his cause and discredits our cause. There may be circumstances from time to time where this will not be true, and at other times and under other conditions it may be advisable to fight such a battle through the public press, but that is for discussion at another time. It is well to remember, in this connection, the statement of Dr. Oliver Wendell Holmes, that "Controversy equalizes wise men and fools, and fools know it."

We are reproducing here three advertisements of the sort under discussion, which have recently appeared. (Figures 1 and 2.) They differ somewhat, and from them the great variety of possibilities can be readily seen. One of these ads fails in one important particular. It does not carry the statement that the members are authorized by law to practice medicine in this State. There may be room for criticism in any copy of this sort put out, and that phase of the problem will receive careful consideration. No doubt, sooner or later, model forms and model copy will be submitted to County Societies for consideration in this connection, but for the present County Societies are choosing their own copy and proceeding in their own way to carry out this plan, with the advice and consent of the state publicity committee, and the councilors, of course.

As stated last month, individuals about to be tried for violating the Medical Practice Act frequently resort to the expedient of running full page ads in the local newspapers, filled with specious arguments and misleading statements, which practice it was felt had a great deal to do with influencing the prospective jurors in their respective cases. We have before called attention, also, to the power of display advertising of this same sort, recommending to the public this, that or the other group of practitioners of peculiar methods. We have said here that one of the objections to resorting to this method of publicity is the fact that quacks and impostors have resorted to this method of publicity to such an extent that it has become discredited in the eyes of ethical physicians. It is unfortunate, of course, that we must appear to be "fighting the devil with fire," but the necessity of the situation is what we are confronting and not what should be the case. We are reproducing here an ad of this type which doubtless was most effective. (Figure 3.) It was evidently prepared by a trained ad writer. These people know the psychology of advertising and how to heat the iron, and how to strike it while it is hot. We can well take a lesson from them in that regard. The difference will be, of course, and the public will be quick to discern it, that in the one instance, reasonable and understandable facts are presented and in the

A Wise and Righteous Law Is Being Flagrantly Violated In this County Every Day

The Courts are Conscientious and Competent; Public Opinion Must Support Them.

Any person who treats sick people for any trouble or disease by any method, whether by prescribing drugs or using a mechanical means or by giving advice, one or all or any method whatsoever, should have knowledge of the human body and its diseases. If he does not know what is the matter with a sick man, he cannot know what treatment is best nor when any particular form or method should be used.

It is against the law in this State for any person to treat or minister to the sick, charging for services, unless he has passed the State Board appointed by the Governor, obtained a license, and registered it with the District Clerk. Any person so treating people by any method or system, whether a regular doctor, a homeopath, eclectic, osteopath, magnetic healer, chiropractor or whatnot, is violating this law.

Contagious diseases spread because unrecognized, children die that ought to have anti-toxin, cancer goes to incurable stages when early scientific treatment might have cured. In short enforcement of the Medical Practice Act will lessen human suffering and save life.

Human life is sacred. The State owes a duty to citizens which it wants to perform. Public opinion must co-operate with the Courts.

The medical profession of Collin County, believing in law enforcement and knowing the dangers of ignorance in the sick room, are supporting the Courts in performing their sworn duty.

Will you not, as good citizens, give your Courts the same moral support? Signed:

Collin County Medical Society

W. G. HARRIS	D. F. HOUSTON	J. T. MANTOOTH	R. A. VERDIER	M. S. METZ	H. H. COMPTON
E. L. BURTON	BEN F. LARGENT	E. L. HAILEY	H. F. WOLFORD	W. D. ELLIS	W. N. MANNING
A. E. JOHNS	J. C. ERWIN JR.	J. C. ERWIN SR.	B. F. GROUNDS	J. D. BURT	JOE W. LARGENT
W. S. WYSONG	P. D. ROBASON	W. R. MATHERS	R. M. WALKER	A. C. CORRY	W. T. LARGENT
	WILL C. WRIGHT	R. L. DAVIS	JAMES H. HICKS	S. F. MORROW	

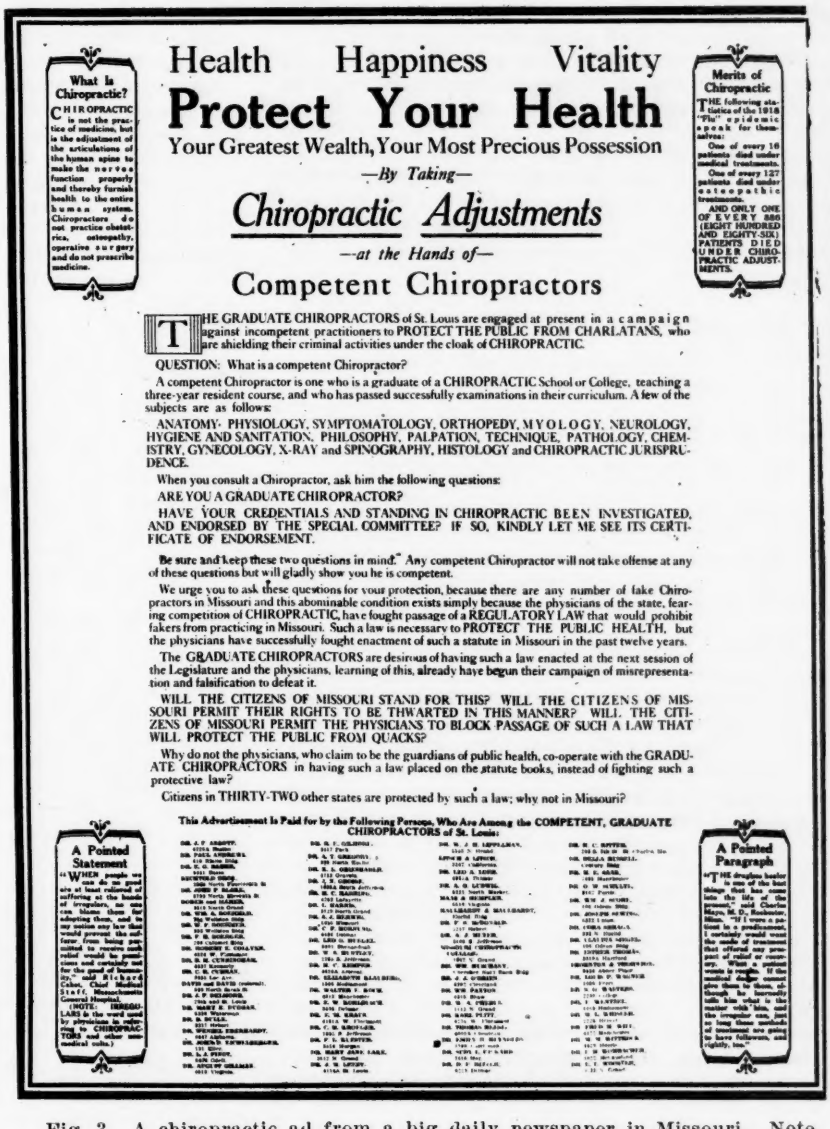
Each of the above is registered with the District Clerk as required by law.

Fig. 2. A facsimile of an effective ad paid for by the Collin County Medical Society, in accordance with the "roster plan" of the State Association.

other, unreasonable theory and misstatement of fact.

FORM OF COMPLAINT IN THE UNLAWFUL PRACTICE OF MEDICINE

Since the beginning of the campaign for the enforcement of the Medical Practice Act, launched by the State Board of Medical Examiners and joined in by the State Medical Association, requests for a form of complaint which would stand the test of the courts and answer the purpose in hand, have been continuously coming to the attention of those in charge. At a conference of the official family of the State Medical Association, held in Fort Worth, September 1, the problem of enforcing the Medical Practice Act received extended attention. The determination to help the State Board of Medical Examiners in this important matter was re-inforced, and the movement in our ranks received a distinct impetus. The Attorney General of the State, the Honorable Dan Moody, delivered the principal address at a dinner on the evening of that day, in which he stressed the importance of enforcing this law and the various pertinent factors involved. He gave particular attention to the form of complaint to be used and the court procedures to be adopted. Subsequently, the form of complaint used in the celebrated Teem case (Teem vs. State, 183 S. W., page 1144) was adopted, and these forms will be furnished upon application to this office, to our general attorney, Mr. C. T. Freeman, of Sherman, or Mr. Lee P. Pierson, Santa Fe building, Dallas. It seems that the ordinary blanks for filing of complaints will not suffice in many cases. In the interest of our records, and for the immediate information of those concerned, we here reproduce this form:



What is Chiropractic?

CHIROPRACTIC is not the practice of medicine, but is the adjustment of the articulations of the human spine to make the nerves function properly and thereby furnish health to the entire human system. Chiropractors do not practice obstetrics, osteopathy, operative surgery and do not prescribe medicine.

Health Happiness Vitality

Protect Your Health

Your Greatest Wealth, Your Most Precious Possession

—By Taking—

Chiropractic Adjustments

—at the Hands of—

Competent Chiropractors

Merits of Chiropractic

THE following statistics of the 1918 "Flu" epidemic speak for themselves:

One of every 16 patients died under medical treatments.

One of every 127 patients died under osteopathic treatments.

AND ONLY ONE OF EVERY 800 (EIGHT HUNDRED AND EIGHTY-SIX) PATIENTS DIED UNDER CHIROPRACTIC ADJUSTMENTS.

THE GRADUATE CHIROPRACTORS of St. Louis are engaged at present in a campaign against incompetent practitioners to PROTECT THE PUBLIC FROM CHARLATANS, who are shielding their criminal activities under the cloak of CHIROPRACTIC.

QUESTION: What is a competent Chiropractor?

A competent Chiropractor is one who is a graduate of a CHIROPRACTIC School or College, teaching a three-year resident course, and who has passed successfully examinations in their curriculum. A few of the subjects are as follows:

ANATOMY, PHYSIOLOGY, SYMPTOMATOLOGY, ORTHOPEDY, MYOLOGY, NEUROLOGY, HYGIENE AND SANITATION, PHILOSOPHY, PALPATION, TECHNIQUE, PATHOLOGY, CHEMISTRY, GYNECOLOGY, X-RAY and SPINOGRAPHY, HISTOLOGY and CHIROPRACTIC JURISPRUDENCE.

When you consult a Chiropractor, ask him the following questions:

ARE YOU A GRADUATE CHIROPRACTOR?

HAVE YOUR CREDENTIALS AND STANDING IN CHIROPRACTIC BEEN INVESTIGATED, AND ENDORSED BY THE SPECIAL COMMITTEE? IF SO, KINDLY LET ME SEE ITS CERTIFICATE OF ENDORSEMENT.

Be sure and keep these two questions in mind. Any competent Chiropractor will not take offense at any of these questions but will gladly show you he is competent.

We urge you to ask these questions for your protection, because there are any number of fake Chiropractors in Missouri and this abominable condition exists simply because the physicians of the state, fearing competition of CHIROPRACTIC, have fought passage of a REGULATORY LAW that would prohibit fakers from practicing in Missouri. Such a law is necessary to PROTECT THE PUBLIC HEALTH, but the physicians have successfully fought enactment of such a statute in Missouri in the past twelve years.

The GRADUATE CHIROPRACTORS are desirous of having such a law enacted at the next session of the Legislature and the physicians, learning of this, already have begun their campaign of misrepresentation and falsification to defeat it.

WILL THE CITIZENS OF MISSOURI STAND FOR THIS? WILL THE CITIZENS OF MISSOURI PERMIT THEIR RIGHTS TO BE THWARTED IN THIS MANNER? WILL THE CITIZENS OF MISSOURI PERMIT THE PHYSICIANS TO BLOCK PASSAGE OF SUCH A LAW THAT WILL PROTECT THE PUBLIC FROM QUACKS?

Why do not the physicians, who claim to be the guardians of public health, co-operate with the GRADUATE CHIROPRACTORS in having such a law placed on the statute books, instead of fighting such a protective law?

Citizens in THIRTY-TWO other states are protected by such a law; why not in Missouri?

This Advertisement Is Paid for by the Following Persons, Who Are Among the COMPETENT, GRADUATE CHIROPRACTORS of St. Louis:

A Pointed Statement

"WHEN people we can do no good are at least relieved of suffering at the hands of irregulars, no one can blame them for adopting them, and in my opinion any law that would prevent the sufferer from being permitted to receive such relief would be pernicious and certainly not for the best interests of the people," said Richard Cabot, Chief Medical Staff, Massachusetts General Hospital.

(NOTE: IRREGULARS is the word used by physicians in referring to CHIROPRACTORS and other non-medical cults.)

A Pointed Paragraph

"THE droplets basket is one of the best things that has come into the life of the present," said Charles Mayo, M. D., Rochester, Minn. "If I were asked to name a predicament, I certainly would want the medical treatment that offered any prospect of relief or recovery. When a patient comes to me after all medical dodges have failed to relieve them, although he hurriedly tells his tale is the matter with him, and the irregular can, and as long these methods of treatment are going to have followers, and rightly, too."

Fig. 3. A chiropractic ad from a big daily newspaper in Missouri. Note the difference in the character of the statements made in this ad and in those shown in Figures 1 and 2.

The State of Texas, county of....., In the name and by the authority of the State of Texas:

1. Before me, the undersigned authority, on this day personally appeared....., who, after being by me duly sworn, on oath disposes and says he has reason to believe, and does believe that heretofore, to-wit, on the.....day of....., 192....., one....., of the county of....., and State of Texas, in said county of....., and State of Texas, did publicly profess to be a physician and surgeon, and did then and there treat and offer to treat diseases and disorders, mental and physical, and physical deformities and injuries, and to effect cures thereof, and did then and there, while so professing, treat and offer to treat*.....and divers other persons to affiant unknown, for a disease and disorder without first having obtained and received a license and certificate of professional qualifications from any authorized State Board of Medical Examiners of this State, and without having a diploma from some reputable and legal college of medicine with verification license of same from a State Medical Examining Board of the State of Texas and without having the same recorded in the district clerk's office in the county of....., in which county the said....., then and there resided, as required by law, the said..... at the time and date aforesaid coming under any of the exceptions as provided for by law exempting him from the provisions and requirements aforesaid, against the peace and dignity of the State.

2. And affiant further deposes and says that he has reason to believe and does believe that heretofore, to-wit: on said.....day of....., 192....., in the county of....., and State of Texas,

one..... of said county and State, did then and there treat and offer to treat diseases and disorders, mental and physical, and physical deformities and injuries and to effect cures thereof, and did then and there charge money therefor, and did then and there on said date treat and offer to treat.....for a disease and disorder, and did then and there receive from the said..... money therefor without first having obtained and received a license and certificate of professional qualifications from any authorized State Board of Medical Examiners of this State, and without having a diploma from some reputable and legal college of medicine with verification license of same from a State Medical Examining Board of the State of Texas and without having the same recorded in the district clerk's office in the county of....., in which county the said..... then and there resided, as required by law; the said....., at the time and date aforesaid not coming under any of the exceptions as provided for by law exempting him from the provisions and requirements aforesaid; against the peace and dignity of the State.

.....

Sworn to and subscribed before me by....., this the.....day of....., A. D., 192.....

.....

.....

*Here give name of patient.

VICARIOUS PRACTICE OF MEDICINE

In years gone by, the embryo physician was allowed to practice medicine under the supervision of a preceptor, or some established physician who would serve in such capacity, in advance of his graduation and license to practice. In those days, when physicians were few and far between, and the need for their services pressing, and the difference between the knowledge of a medical student who had read medicine under a good preceptor and the physician who was authorized to practice, was largely a matter of experience and personal observation, this was a good thing. As the art of practice developed and the various sciences were brought into play, this difference became wider, and it eventually appeared to be unsafe to continue the system. So the laws of this state enacted to control the practice of medicine, were so framed as to forbid this procedure. The right of a physician to employ an individual as an assistant, under his direct supervision, in the performance of any act the said physician is authorized to perform, has not been questioned, but he cannot, under the law, refer any part of his work as a practitioner of medicine to any person unauthorized to practice medicine, to be accomplished outside of his personal and direct supervision.

Of late years, the followers of peculiar systems of practice, who either do not desire or cannot for any reason qualify under the state law for the practice of medicine, have in many instances resorted to a subterfuge of this sort for evading the law. It is evidently believed by some that a physician may refer patients to them for their peculiar treatment, in the effort to prevent or cure disease, bodily deformity, etc., and that they may treat such patients so referred with impunity. This is true only to the extent that their practices are not in violation of the Medical Practice Act. For instance, a masseur may practice his art and apply the well established scientific treatment of massage, upon the request of a licensed practitioner of medicine that he do so, exactly as a licensed pharmacist would fill the prescriptions of a licensed physician. For that reason the masseur is exempt from the Medical Practice Act, and for the same reason it is provided in the exemption clause that the said masseur must be acting within his sphere as such. In other words, even the masseur, who is exempt under the law, may not apply his art as a practitioner of medicine, whether or not told to do so by a licensed physician. It is clear that no licensed physician can have the power to authorize others to practice medicine. In support of this contention, we submit the following paragraphs from an official opinion rendered to Dr. T. J. Crowe, secretary of the State Board of Medical Examiners, by the attorney general's office, written by assistant attorney general, Mr. C. A. Wheeler:

"Replying to the question, you are advised that in our opinion it would be a violation of the law for any person who shall publicly profess to be a physician, or surgeon, to treat any disorder or disease, mental or physical, or any physical deformity or injury by any system or method or to effect cures therefor, whether such person claiming to be a physician or surgeon received compensation either directly or indirectly. See article 755, penal code, subdivision 1. Therefore, if a physician employs as assistants in a hospital persons who profess to be physicians or surgeons for the purpose of giving treatments for any disease or disorder, mental or physical, etc., who are unregistered practitioners, as required by law, subdivision 1, article 755, penal code, would be violated.

"Subdivision 2, article 755, penal code, applies to all persons who shall treat or offer to treat any disease or disorder, mental or physical, or any physical deformity or injury by any system or method, or to effect cures thereof and charge therefor, directly or indirectly, money or other compensation, even though they may not publicly profess to be a physician or surgeon, and if the assistants referred to in your question are not publicly professing to be physicians or surgeons, but are directly or indirectly charging money or other compensation for the treatment they give, such conduct is prohibited under subdivision 2 of article 755, penal code."

NURSING EDUCATION

The problem of Nursing Education and nursing service is of vital concern to our hospitals, colleges, physicians and the public. Much thought has been and is being given to attain an acceptable policy of education and to meet the demands of public and profession in an efficient and reasonable manner. To aid and to institute such a solution, our Joint Committee on Public Health Education is interesting itself in the problem as a feature of public health conservation. We append the preliminary report for our members' consideration.

PRELIMINARY REPORT ON NURSING SERVICE TO THE JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION

As a preliminary to any study of nursing service it appears to us important to get as nearly as possible an opinion of the number of nurses of various kinds available in the state of Michigan. This is by no means a simple business and it is probably true that no figure can be obtained which is more than reasonably accurate. The only authoritative source of information on this point is the State Board of Registration of Nurses and Trained At-

tendants. Through the courtesy of the secretary of that Board, Mrs. Moore, we have been able to get the figures for recent years. These consist of the number of nurses registered in any one year which means either nurses recently graduated or nurses who have moved into the state and also the number of nurses who have renewed their registration, as they are supposed to do every year. Since the figures for 1925 are necessarily incomplete, we have taken the figures for 1924 which show 1,056 nurses registered and 4,860 renewals giving a total of 5,916. For the same year the number of persons who renewed their registration as trained attendants was 244. The total number registered as public health nurses was 226. These figures tend to show that there is one nurse for every 672 persons living in the state of Michigan, using the most recent figures on population for the estimate. This figure should be compared with the number of nurses in the whole country as compared to population which shows one nurse to every 704 persons. Though I realize that these figures are not accurate they are probably sufficient for a survey of the situation.

It appeared to us next important to form some estimate as to the distribution of nursing service in the state as between private practice, institutional and public health work and the number of nurses graduating who ultimately leave the profession, whether by reason of marriage or to take up some other work. We found that there were no available figures upon this point from any source to which we had access. Your Committee, therefore, sent a letter to the superintendent of every training school in the state having twenty-five or more nurses in training and received answers from a representative group of sixteen which during the last five years had graduated 1,390 nurses. They were asked to give the number of nurses graduated during this period and the number or the estimated number who were doing institutional or public health nursing and the number who had left the profession. Of the 1,390, 775 were believed to be in private practice; 332 to be in institutional or public health nursing and about 24 per cent to have left the nursing field. In these replies a certain proportion were dependent upon estimates and it therefore seemed interesting to compare the estimates with a group of hospitals in the state in whom the actual figures were known. We therefore took a list of eight training schools which have graduated 673 nurses during the last five years and in regard to whom accurate figures are available. Of these, 283, or 42 per cent, are engaged in private practice; 213, or 31 per cent, are in institutional or public health nursing; and the balance, or 27 per cent, are not engaged in the profession of nursing. From this it would appear that the figures obtained from something like half the group in which the facts are known would show a somewhat larger proportion of nurses engaged in institutional and public health work as compared with those in private practice. If one were inclined to pursue this question still further, it would be interesting to take the statistics of one of the larger training schools in which an accurate record has been kept of the distribution of their nursing graduates during the last twenty years. This shows the following distribution:

Private nursing	Institutional	Public Health	Married	Died	Unknown	Total
116	142	38	239	21	110	666
or	or	or	or	or	or	
21.3%	17.2%	6.1%	35.8%	3.5%	15.1%	100%

From this it appears that a larger number are engaged in institutional and public health nursing than are engaged in private practice and that the number who have left the profession by reason of marriage or other cause is very considerable. While it is obviously dangerous to draw conclusions from such relatively small statistics, it seems fairly clear that of the graduates in nursing, a very considerable proportion prefer institutional or public health work to private practice and perhaps not more than half of the graduates will be found available for the actual care of patients outside of institutions. From many sources during the last ten years has come evidence of the so-called shortage of nurses. This has not been due to any diminution for during this period the increase in the number of nurses actually graduated from training schools has been over 80 per cent. It does mean, however, one of two things, either that the public is becoming much more anxious to employ nursing service or that the number of graduates going into other fields has prevented the very great increase of nurses from being of its greatest value in nursing service. In an article by Dr. Goldwater in 1921 he comes to the conclusion that 300,000 nurses would be required to give adequate service in the hospitals already existing. But he also points out that any such number would be entirely beyond the requirement of the community for nursing service. The question is, however, a pretty academic one since there is no possibility of such a large number of persons being engaged in training at any time in the near future and, in fact, the number at present in training is perhaps somewhere near the maximum number which can be obtained at the present time. This figure is probably in the neighborhood of 57,000 of whom perhaps a third graduate each year.

Now it is by no means easy to say how many nurses there should be in a given area in order to give the desired amount of nursing service, but perhaps some line may be gotten upon this question by comparing the number of nurses available with the number of physicians. The most recent estimates appear to show that there is one nurse to every 672 persons in Michigan as compared with one physician to every 822. It seems quite clear that the number of nurses ought to exceed the number of physicians by a larger proportion and that there should probably be at least twice as many persons prepared to care for the sick in the nursing field as in the field of the practice of Medicine. The problem, therefore, is that of increasing the number of persons qualified to care for illness of varying degrees of severity. As has frequently been pointed out, the trained nurse is a highly skilled person whose services are indispensable in the care of acute or serious illness, but there are also a large number of persons less seriously ill who could get adequate service from persons less highly trained and less experienced. This means that an increase in the number of persons commonly referred to as trained attendants would probably be the most effective method of assisting in the present difficulty . There appears to be evidence that the number of graduate trained nurses who are going into the field of institutional and public health work is steadily increasing and with the continued growth of work in these fields such a tendency would probably continue to in-

crease. It, therefore, follows that any method which can be adopted to increase the number of less fully trained people who would be available for less serious illness is highly desirable. Your Committee does not feel as if its present study of the problem had entitled it to an opinion as to the most available methods for this purpose. There is a considerable body of well considered opinion to the effect that the education of trained nurses and trained attendants cannot profitably be carried on under the same roof. Constant comparisons to the disadvantage of the trained attendant are unavoidable and the atmosphere is apparently not likely to be congenial. It is suggested, therefore, that the training of attendants must be carried on elsewhere than in hospitals having training schools giving a three year course, though it is not impossible that such institutions might have other facilities at their disposal for the turning out of trained attendants. We believe that a further study of the possible methods of enlarging the group of trained attendants would be advantageous.

We wish to emphasize the fact that this report is only preliminary and that no claim is made for great accuracy of the figures. We desire also to thank the directors of the training schools and the State Board of Registration in Medicine for their cordial co-operation.

Hugh Cabot,
W. T. Dodge,
F. C. Warnshuis.

PERIODIC PHYSICAL EXAMINATIONS

In this issue under "Among Our Letters" there will be found a communication from the A. M. A. calling attention to a standard examination blank that has been devised, as well as a guiding manual for the making of periodic physical examinations. Under the minimum program plan that is being advanced for County Medical Societies there is one proviso whereby the County Society will bring about the periodic physical examination of its members. This is a feature that is being stressed, together with the other features of that program. We preach this to the public, but we would be very inconsistent if we failed in observing our preachings. It would be embarrassing, too, if a patient asked you, after you had urged him to have a physical examination, "Doctor, when were you examined?" Therefore we are urging that each member set a good example by taking a physical inventory of himself. Yes, we had ours this past month.

We are therefore calling attention to this and are very pleased to note that the Houghton County Medical Society has officially designated the week of November 1-7th as the time in which each member of that Medical Society will secure a physical examination, not only of himself, but also for every member of his family. That is a splendid example and one that should be adopted by every County Society. Set aside one week or two, and make it a point that every member has a physical examination and don't be afraid to tell the public through your local papers that you are practicing what you preach. May we not have reports of the action taken by your County Society.

And, while we have mentioned the minimum program in this comment, we also draw attention to the fact that the Alpena County Medical Society organized a team which put on the program for the regular meeting of the Bay County Medical Society. That indicates cooperative spirit and effort and reveals what organizational effort will accomplish if but exhibited. County meetings can be made very interesting and instructive if sister societies will call upon each other for teamwork.

We are indeed encouraged by the awakening that is being revealed throughout the entire state in Society work. We are convinced that we are entering upon a new phase of medical activities and accomplishments. A little initiative and a moderate enthusiasm will produce desired and profitable results. We urge that county officers exhibit these two motivating essentials.

LODGE PRACTICE

There are certain fraternal organizations and a few of a benefit insurance type that seek to provide for their members free medical services at a nominal premium rate. These organizations then enter into contract or agreement with one or more doctors to render professional services to these members at a flat yearly salary or a minimum nominal fee per call or office visit. At one time this practice was quite prevalent and it is still manifested in some localities. It is, however, gradually becoming extinct for doctors preceive wherein they have been the goats.

We are glad to see that the doctors of Houghton County have taken definite steps to bring about a cessation of this type of work in their county. We congratulate them upon the step taken when they adopted and signed the following resolution:

We, the undersigned physicians and surgeons, being convinced that the higher ideals of the medical profession would be advanced and exemplified and that harmonious feelings and relations would prevail among members of the profession, have decided and do hereby agree that we will not hereafter serve any appointment or enter into any contract as physicians or surgeons with any of the various benevolent and fraternal organizations, and pursuant to this decision and agreement we herewith affix our signatures, thereby indicating that we consider ourselves bound individually to observe the letter and spirit of this agreement.

Signed by the Houghton County Medical Society:

Philip D. Bourland,
H. M. Joy,
J. W. Moore,
I. D. Stern,
G. C. Stewart,
Thomas P. Wickliffe,
W. H. Ellis,
Alfred LaBine,

O. H. Kohlhaas,
C. H. Rupprecht,
C. E. Rowe,
J. W. Kirton,
J. C. Abrams,
J. B. Quick,
M. C. Roberts,
A. D. Aldrich,
W. A. Manthei,
K. C. Becker,
E. A. Bicknell,
A. C. Roche,
R. J. Maas,
W. H. Dodge,
W. R. Bridgman,
R. V. Buckland.

Editorial Comments

Every now and then there bobs up a report as to how some man or men prostitute the profession and their therapeutic armamentarium by catering for purely a mercinary reason to some fad or folly. Right now it is the X-ray man, or at least some of them, who are working a gag and preying upon women—Society Matrons and Belles—by giving X-ray treatments to the exillary region for the purpose of destroying the function of the sweat glands and producing "dry armpits". It's five dollars a treatment and it takes as many treatments at that price as the operator can put across. Women are falling for it and the professional prostitute is pocketing the coin. We pity the man who poses as a Roentgenologist who cannot find sufficient real diagnostic work to do and must stoop to this base commercialism. Well might charges of unprofessional conduct be preferred against him and we sincerely hope that physicians will express their disapproval of such type of practice as to withhold all their X-ray work from that breed of men. We will furnish names if desired.

Read what Texas is doing to foster public endorsement and good will. We are publishing the editorial in this issue. We recommend that this work be considered by every County Society and that they add that feature to their minimum program. We anticipate that if every county will utilize this method in their county that they will create the same sentiment that Texas has created. May we not have your reports as to how this appealed to your members when you bring it up for discussion at your next county meeting?

There is an Indiana concern that has been sending to doctors by mail three handkerchiefs with the request that you remit one dollar in payment. Other firms send pencils, pens, greeting cards, etc., asking the recipient to remit a named price. Tickets for concerts and benefits are sometimes distributed in the same manner. We are not inclined to impart legal advice, but we believe that if in place of returning the articles or remitting the requested money, they were ignored altogether, this annoying sales method would soon cease. There is far too great an abuse of our mail system. Drug firms of proprietary type flood the mail with glaring post cards and as one doctor stated "two-thirds of a doctor's mail is usually composed of such and similar advertising trash." We presume that as long as the postage is paid such mail will be delivered. The only remedy that can be suggested is to raise the mailing rate on second class matter and prohibit its being mailed as first class mail. In this day of investigation tendency, it might be well that a commission be appointed to investigate and submit a remedy for the abuse of our postal service. Oh well, as long as these firms catch a bite here and there they will pursue their method so that about the only way to get off the "sucker list" is to not reply and dump it all in the scrap pile—it helps to start a fire these cold mornings.

In this issue we are publishing the annual address of the President of the Wayne County Medical Society as well as the annual reports of Wayne's standing committees. We do this for two purposes—first to record and impart that which an active, large County Medical Society can and does accomplish by way of organized effort for the good of its members and secondly, to point out wherein and how other County Societies, though they be not numerically large, may in the same manner and by the exhibition of similar effort achieve the desired ends that is being sought for the benefit of the people and its members. We congratulate Wayne upon its splendid work and convey our every wish that the ensuing year will witness the same activity with added success and increased results. These reports should be an inspiration and impetus for every county organization.

Ford Hospital has created a mild sensation in medical circles by throwing away its price list for human repairs and parts. The Ford staff has been officially informed that the flat-rate system of charging for the treatment of human ailments has been abandoned and that "the patient's charges will be on an income basis," which is the customary method of the medical profession as a whole in making charges.

The Ford method still differs, however, from the method of the profession as a whole in one interesting particular. Mr. Ford has placed a maximum limit of $1,000 on surgical fees, and a maximum limit of $70 a week on medical charges. One of Detroit's wealthiest women, for instance, was recently charged $1,000 for an operation for appendicitis at Ford Hospital, while a young woman of very modest means was charged $35 for the same operation. The medical profession as a whole places no limit on operating fees, though a committee of the staff of Harper Hospital is considering the advisability of doing so. Harper Hospital Bulletin apparently does not think much of the suggestion. It says:

"Our great charities, or free clinics, including our city hospital, are manned by the medical profession without compensation. * * *

"People of wealth demand more than ordinary service, and plenty of it—the most exacting kind. Their prominence adds responsibility to their care. They occupy the most expensive quarters, and nothing in nursing service is overlooked. Can there be any logic in asking the doctor on whom so much responsibility rests, to render a usual average bill?"

Why Mr. Ford has abolished the fee system on which he has operated for 10 years is not publicly stated; but the fact is that besides the millions he has put into his hospital he has had to make up a deficit of $2,400,000 in that period. It is a reasonable assumption that by charging his patients according to their income he expects to get more business from people who could not afford to pay his fixed fees, and to reduce his annual deficit. Mr. Ford's experience seems like a fair vindication of the ancient fee system of the medical profession.

—Detroit Saturday Night.

It is announced that on September 1, 1925, a change in policy relative to charges to patients of the Ford Hospital was placed in effect. "On and after that day there will be a maximum operating fee of one thousand dollars, and a maximum medical charge of seventy dollars per week." It is understood that complete details of the new plan have not been perfected to the point where they can be published. A determination of the patient's bill will be made on an income basis. Out-patient charges will remain the same as in the past.

We feel that this change of policy on the part of the Ford Hospital is in line with the progressive policy pursued in the Ford industries. It was exactly this flat fee, pay-as-you-enter idea, treating the rich and poor alike, that was objected to some two years ago. It was felt that Mr. Ford's organization was entering into competition with legitimate professional men on an unjust and undemocratic basis, in so much as this organization was backed by unlimited means which were available for any and all deficits which might arise. Five years has disclosed this deficit to be two million four hundred thousand dollars, according to reports, and it is now felt that the Ford Hospital has justified the stand taken by the Detroit profession against this unreasonable competition.

If it is Mr. Ford's desire, and we believe it is, to serve the people of these United States and Detroit, to the very best advantage, his hospital facilities will soon be made available to members of the medical profession engaged in private practice as opposed to the present plan of employing full-time doctors to serve as cogs in a great wheel. People naturally and universally prefer to choose their own doctors—and after all, why shouldn't they? Medical leaders—men who through their ability and long study have built for themselves a reputation, are rarely found with their personalities submerged in any institution.

Wayne County Bulletin.

MINUTES OF THE OCTOBER MEETING OF THE EXECUTIVE COMMITTEE OF THE COUNCIL

The Executive Committee of the Council met in regular monthly session in Grand Rapids on October 15, 1925.

Present—J. B. Jackson, George LeFevre, R. C. Stone, B. R. Corbus, H. G. Smith and F. C. Warnshuis.

1. The threatened libel suit against two doctors of the Calhoun Medical Society was thoroughly discussed and in reviewing the entire incident the Executive Committee felt that the legal department of our State Society should defend these members, and thus in conformity with the referendum which was submitted to each member of the Council and which approved such defense, the legal department of the Society was instructed to put in appearance at this suit.

2. Chairman Jackson announced tentative date for the annual meeting of the Council has been selected for January 14, 1926.

3. Executive Secretary, Mr. Smith, reported on his activities of the past month and the work that he is doing in regard to the securing of the adoption of the Minimum Program by the County Societies, and also on the schedule that had been adopted for the continuance of the clinical conferences in each councillor district. Plans presented were approved and the Executive Committee desires to impart to the Council that there is a wonderful awakening of interest and expression of activity as has not been manifested in our State Society for a number of years. It is felt that the County Societies are manifesting an interest which will result in the best year for organizational activity that the Society has experienced.

4. Chairman Jackson reported for the Special Committee to confer with the Regents of the University relative to the establishment of a Post-Graduate School. The subject is being given proper attention.

5. Commissioner of Health, R. W. Olin, requested the approval of a slip to be sent to doctors to be enclosed in their mail to their patients, in which diphtheria immunization was urged. The Executive Committee gave approval of this plan and instructed the Secretary to so advise the Commissioner of Health.

6. Secretary-Editor reported on the finances and the general activity of the state office, which report was approved.

7. Chairman Jackson reported that there was a discussion at the last meeting of the Joint Committee on Public Education relative to newspaper publicity, and that the Joint Committee is favorable towards undertaking a campaign of newspaper publicity for the education of the people of Michigan regarding health and disease prevention method. It was felt that the State Society could well participate in this undertaking and assume part of the expense that would be involved because of the good that would result to the profession from such a campaign. It was recommended that the matter be referred to each member of the Council for consideration, and that the subject be made one of general discussion at the annual meeting in January.

8. The Executive Committee instructed the Secretary to arrange the following program for the annual meeting of the Council in January—

The Council to meet with the Joint Committee on Public Health Education in Ann Arbor at noon of January 14th. The Council thus to have its first session during the afternoon. The Secretary was then instructed to invite the faculty of the Medical Department of the University, the faculty of the Detroit College of Medicine, Council of the Wayne County Medical Society, the members of the State Board of Registration in Medicine, and the Commissioner of Health of the State, to join with the Council at a dinner at 6 o'clock at the Michigan Union, during and after which there would be a general discussion of the problems represented by these several groups and their relationship to the State Society and to the Profession of Michigan. The Council is then to hold its final session on the morning of January 15th for the completion of its business.

9. The Secretary reported upon the increased activity of his office by reason of work that was required in preparing for clinical conferences and for the institution and carrying out of the Maximum Program for County Societies. He pointed out the success of this program depended upon a constant check-up on the activity of each County Society and that this would entail a marked increase of correspondence. On motion of Dr. LeFevre supported by Dr. Stone the Secretary was authorized to employ additional office help.

The meeting adjourned at 9:30 p. m. until the regular monthly meeting of November, which will be called by the Chairman.

The Kalamazoo Academy inserted a physical examination blank with the regular notice of their meetings that is sent to its members. This is a splendid plan and will remind members that a

personal physical examination is a part of the member's obligation in carrying out the Minimum Program plan. We are passing the suggestion along to our County Societies. The Kalamazoo Academy is also considering installing a kitchen equipment in its Club Rooms so as to serve luncheons in connection with its regular meetings.

Among Our Letters

NOTE.—*This department is the open forum of our members. Your communications and discussions are welcomed. Anonymous communications cannot be accepted, though at times names may be omitted by the Editor. Personalities will not be printed and responsibility for opinions is not assumed. We invite your interest in this department. Address: The Editor, Journal, Michigan State Medical Society, Powers Theatre Bldg., Grand Rapids, Mich.*

Editor of The Journal:

As you know November 5th is the date for the Northwestern Clinical Meeting in Manistee. While we are not so arrogant as to state that we will equal the Post Graduate Conference held in Cadillac this last week, still we feel that the program will be worth while attending. If you find space to mention this meeting in The Journal, we trust the physicians in this section of Michigan will accept this as an invitation to attend.

Allow me to take this opportunity to tell you how the men from this section of M-11 appreciated the program at Cadillac.

The only unfavorable criticism was from a detail man who wasted a day in Ludington trying to call on the doctors and found the great majority out.

We especially like the sound of common sense, practical nature of the subjects presented. At times it is as important to assure us that our old methods are still correct as it is to get us dizzy with a lot of new theories that may work out some time in the future.

The Post Graduate Conferences are a great help. No member who has attended one or more, needs ask what is being done with the paltry $10 per year state dues.

Sincerely yours,
J. F. Goeke, Secretary-Treassrer,
Manistee County Med. Soc.

Editor of The Journal:

Pursuant to the action of the House of Delegates at its meeting in Atlantic City, a conference has been arranged on the subject of periodic examinations of apparently healthy persons, to be held in Chicago on the evening of Friday, November 20 at 7:30 o'clock and on Saturday morning, November 21, at the headquarters of the American Medical Association, 535 North Dearborn street, Chicago.

Participants in this conference will be (1) the Secretaries of State Medical Societies, who are holding their annual conference at headquarters at this time; (2) the officers and trustees of the American Medical Association, and (3) a group of persons who have been especially interested in this movement and have made important contributions thereto by published articles or in other ways. The list of those to whom this notice is being sent is as follows:

Isaac Abt, M. D., Charles Elliott, M. D., J. L. Miller, D.M., Chicago; Alfred Shipley, M.D., N. Y.; H. Douglas Singer, M. D., Chicago; J. H. Cannon, M. D., Charleston, S. C.; Henry W. Cook, M. D., Minneapolis; Y. C. Dunham, M. D., Washington; John Jenninngs, M. D., Brooklyn; Edward Martin, M. D., Pa.; M. B. Hussey, M. D., Sidney, O.; Isaac D. Rawlings, M.D., Ill.; H. E. Swanberg, M.D., Quincy, Ill., Hoyt Dearholt, M.D., Milwaukee; Chas. Emerson, M. D., Indianapolis; Roy R. Ferguson, M. D., Chicago; G. E. deSchweinitz, M. D., Philadelphia; Frank Billings, M. D., Chicago; Joseph Capps, M. D., Chicago; Haven Emerson, M. D., New York; Anna M. Richardson, M. D., N. Y.; Alec N. Thomson, M. D., New York; E. J. G. Beardsley, M. D., Philadelphia; Elliott B. Edie, M. D., Uniontown, Pa.; Z. Causey, M. D., Douglas, Ariz.; LeRoy P. Kuhn, M. D., Chicago; Roger I. Lee, M. D., Cambridge, Mass.; Thomas Ordway, M. D., New York; Stanley Osborne, M .D., Hartford, Conn.; L. E. Siegelstein, M. D., Cleveland; Orin Sage Wightman, M. D., New York; Walter Biering, M. D., Des Moines, Ia.; E. E. Irons, M. D., Chicago; William O. Pusey, M. D., Chicago; Ray Lyman Wilbur, M. D., California, and the Secretaries of the State Medical Societies, and the officers and trustees of the Association.

I enclose copy of the tentative program. I hope very much that you can attend this meeting and participate in this discussion. It is hoped that out of it will come suggestions for future conferences and other means of arousing a more widespread interest in periodic examinations of the apparently healthy.

Yours very sincerely,
John M. Dodson.

Editor of The Journal:

I am greatly dissappointed that neither my son or myself, are able to attend this meeting of the State Society, for I know it will be a good one. Circumstances over which we have no control are keeping us at home.

I have just received a letter from our Health Commissioner, Dr. Olin, informing us of the abolition of all fees for registration of births and the reporting of T. B. cases. This is just another instance of his looking after the interests of physicians. I have always understood that the only reason of any fee at all was that physicians could not be compelled to work for nothing, so to make it legal, it was necessary to give them a small fee, then the law could be enforced. If this is the case, I feel that the matter should come up before the House of Delegates. With the demands made upon us by and through our noble Health Commissioner, it is almost necessary to keep a stenographer for that purpose alone. If this letter reaches you in time, you may use it as you see fit and I hope Olin the Great will be on hand to hear it. This is one of the many reasons why I did not want to miss this meeting.

Sincere regards to all and best wishes for a most successful meeting, I am

Sincerely yours,
Charles T. Southworth.

Editor of The Journal:

I was very sorry not to see more of you during my recent visit to your city and Muskegon. I suppose Dr. Colver told you that we were both knocked out by something which we ate at the banquet and after my attempt to deliver my paper

at Muskegon that intensely hot day, I was feeling pretty well the worse for wear hence at the suggestion of Dr. Colver, I jumped in a car and made a break for Battle Creek.

I enjoyed my visit very much and was especially pleased with the attention I received and the interest of the men attending. I hope your new venture in the State Program is going to prove a success. I have attended a good many large meetings of medical men, but yours is a State Society which impressed me as being above the average. I am especially pleased with your State Journal. Not only its high class appearance, but the contents as well. I have been dissatisfied with the makeup of our Journal for several years, and when I was president I tried to get a change made. If you will be good enough to forward a copy of the August and September issue to Dr. J. R. Cowan, President Kentucky State Medical Society, Danville, Ky., I would appreciate it very much. I have asked him to bring this matter before the House of Delegates and exhibit the style and general appearance of your Journal as compared with ours, seeing if he cannot get them to change it, to one something like yours.

Again assuring you of my hearty appreciation of the courtesies and the cordial invitation to address your State Society, and regretting that I could remain no longer with you, I am,

Sincerely,

J. A. Stucky,
Lexington, Ky.

Editor of The Journal:

Attention: Dr. F. C. Warnshuis, Secretary Editor.

Reference is made to that portion of your letter dated August 25, 1925, relative to the Bureau's ruling that physicians are not entitled to deduct from their gross income the expenses incurred in connection with postgraduate study or in attendance of national and state medical conventions.

You are advised that the ruling that expenses incurred in connection with post-graduate study and attendance of professional meetings and conventions are personal expenses does not apply specifically to physicians, but to all persons who incur such expenses regardless of their profession or business. The ruling is based upon the fact that such expenses do not come within the classes which are deductible under the provisions of Section 214 (a) (1) of the statute, which read in part as follows:

"(a) That in computing net income there shall be allowed as deductions:

"(1) All the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade or business, including a reasonable allowance for salaries or other compensation for personal services actually rendered; traveling expenses (including the entire amount expended for meals and lodging) while away from home in the pursuit of a trade or business; * * *"

In order to be entitled to the deduction of traveling expenses the taxpayer must be "away from home in pursuit of a trade or business." The expenses incurred by a physician in attending meetings of medical societies are but remotely connected with the carrying on of his profession. It was held by the Attorney General in his opinion rendered May 19, 1919, promulgated as Treasury Decision 2847, that only ordinary and necessary expenses are allowed which include expenses incurred directly in the maintenance and operation of a business and not those which may be beneficial or even necessary in the broader sense.

Respectfully,

J. G. Bright,
Deputy Commissioner.

Editor of The Journal:

A new manual of suggestions for the conduct of periodic examinations of the apparently healthy has just come from the press of the American Medical Association. I am sending you a copy under separate cover.

We believe that if a copy of this pamphlet could be placed in the hands of every member of the American Medical Association it would do more than perhaps anything else to arouse an interest in this movement to induce physicians to undertake this activity and prepare themselves to make thorough and careful examinations. The most certain way to secure such a wide distribution of the pamphlet is through the State Medical Associations. The booklet sells for 20 cents the copy, but we can furnish it in orders of 500 or more at not to exceed 8 cents per copy, postage extra.

The officers of two of the State Medical Societies are planning to purchase a sufficient number of copies to supply every one of their members. On large orders we can place the imprint "Compliments of the ..... Medical Society."

I wish you would bring this matter to the attention of the officers of your State Society and suggest that steps be taken to distribute the pamphlet in this way. The price in lots less than 500 is as follows:

25 copies	$2.50
50 copies	4.50
100 copies	8.50

I should be very glad to have your opinion of this plan and to learn whether or not you will bring the matter to the attention of your association.

Yours very sincerely,

John M. Dodson, M. D.

Editor of The Journal:

I am interested in compiling a collection of short stories written by doctors. As many of these stories are published under assumed names, or the medical degree of the author is omitted, it is difficult to locate them. I am, therefore, writing to ask that if you or your readers know of any short stories published by medical men you will kindly communicate the fact to me.

Assuring you that any information relative to this matter will be greatly appreciated, I am,

Yours truly,

Harold Hays,
22 West 74th St.,
New York City.

State News Notes

The formal dedication of the new University Hospital has been arranged for Thursday evening, November 19th.

While interest in the Hospital and its program is general, the hospital authorities feel that the Medical Profession has a very special interest. Accordingly there has been arranged, in addition

to the usual formal exercises, to present a series of clinics and addresses from distinguished members of the Medical Profession, beginning Thursday afternoon and ending Saturday noon. On Thursday afternoon at 4:15, Dr. W. J. Mayo will deliver the annual Mayo Lecture under the title "Splenic Syndromes".

In the evening the formal exercises will be held at the Hill Auditorium at which President Little will preside. It is expected that Governor Grosbeck, Senators Couzens and Ferris, State Representative Michner, Regent Sawyer, and Dr. C. G. Darling and Dr. F. C. Warnshuis, President and Secretary of the State Medical Society, will be present and addresses will be given by Doctors V. C. Vaughan, W. J. Mayo and Wm. S. Thayer.

On Friday morning Doctors Thayer, Mayo, McDonald of Toronto, Canada, and Williams of Rochester, N. Y., will conduct clinics at the hospital. Friday afternoon and Saturday morning will be occupied in Clinics conducted by distinguished members of the profession from the State of Michigan. It is planned to have several of these clinics going on at the same time in different amphitheaters and lecture rooms. Demonstrations also will be conducted in the various laboratories during the Friday and Saturday morning meetings.

On Friday evening there will be a general meeting in the Hill Auditorium with several speakers, Dr. R. M. Olin, Commissioner of Health; Dr. George LeFevre, President of the State Board of Registration; Miss Mary A. Welsh, President of the State Nurses' Association; Doctors H. A. Haynes, of Ann Arbor; J. B. Herrick, of Chicago and C. P. Emerson, of Indianapolis, who will speak on the general relations of the hospital to the community.

Saturday afternoon the last and one of the best games of the season will be played at Ferry Field. While a limited number of tickets will probably be available up to Friday afternoon, it is hoped that as many as possible will provide themselves before coming.

The following is a partial list of the gentlemen who are invited to take part in the program:

Armstrong, R. B.	Charlevoix
Balch, R. E.	Kalamazoo
Ballin, Max	Detroit
Bourland, P. D.	Calumet
Boys, C. E.	Kalamazoo
Campbell, A. M.	Grand Rapids
Campbell, Don M.	Detroit
Case, J. T.	Battle Creek
Christian, E. A.	Pontiac
Cooley, T. B.	Detroit
Corbus, B. R.	Grand Rapids
Crane, A. W.	Kalamazoo
Douglas, B. H.	Northville
Fischer, A. F.	Hancock
Freund, H. A.	Detroit
Green, B. F.	Hillsdale
Harris, R. H.	Battle Creek
Hornbogen, A. W.	Marquette
Jackson, J. B.	Kalamazoo
Jennings, C. G.	Detroit
Johnston, C. H.	Grand Rapids
Kamperman, G. A.	Detroit
Kempton, R. M.	Saginaw
Lockwood, B. C.	Detroit
Manwaring, J. G. R.	Flint
Marshall, W. H.	Flint
McKean, G. E.	Detroit
McLean, Angus	Detroit
McNamara, Wm. E.	Lansing
Munro, C. D.	Jackson
Powers, J. H.	Saginaw
Pritchard, J. S.	Battle Creek
Randall, H. E.	Flint
Ricker, O. L.	Cadillac
Sample, J. T.	Saginaw
Scrafford, R. E.	Bay City
Seybold, G. A.	Jackson
Sladen, F. J.	Detroit
Smith, Ferris	Grand Rapids
Smith, R. R.	Grand Rapids
Stone, R. C.	Battle Creek
Vaughan, J. W.	Detroit
Waldeck, G. M.	Detroit
Watkins, J. T.	Detroit
Webster, E. H.	Sault Ste. Marie
West, W. K.	Painesdale
Whinery, J. B.	Grand Rapids
Wilbur, E. P.	Kalamazoo

Dr. D. C. Rockwell, of Kalamazoo, has resumed practice after six months spent in postgraduate study.

Dr. W. T. Dodge, of Big Rapids, has been appointed Surgeon of the Michigan Soldiers Home, Grand Rapids. It is announced that he will assume his new duties on November 1st.

Dr. G. L. LeFevre, of Muskegon, and Dr. Guy L. Connor, of Detroit, were elected President and Secretary, respectively, of the State Board of Registration in Medicine at the annual meeting in October.

We regret to record the death of Mrs. C. T. Southworth, of Monroe. The sympathy of our entire membership is extended to Dr. Southworth and his son.

The Physicians and Surgeons of Michigan are invited to make full use of the Clinical Bulletin when visiting Detroit.

Editor of The Journal:

This will acknowledge receipt of your letter of July 3, 1925, in regard to the Detroit Clinical Bulletin. The following is a note which I hope you will see fit to publish in the next issue of the State Journal:

DETROIT CLINICAL BULLETIN

A daily schedule of clinical work of Detroit. The Bulletin lists all operations, medical clinics and ward walks and meetings, giving the name of the clinician and the hour of operation or presentation.

The Bulletin is available at all hospitals in Detroit, at the Detroit College of Medicine and Surgery, at the surgical instrument houses, and will be mailed to visitors at the hotels before eight o'clock, a small charge being made to cover special postage.

The medical profession is invited to make full use of the Bulletin.

The bulletins of other cities are posted at the Wayne County Medical Society Building daily for the convenience of visitors.

Very sincerely yours,

O. H. Whittaker, M. D.,
Chairman, Detroit Clinical Bulletin Committee.

OUR SOCIETY BUSINESS AND ACTIVITIES

HARVEY GEORGE SMITH
EXECUTIVE SECRETARY

NOTE: This Department will each month contain a discussion and report of our Society work and planned activities. Your interest and correspondence as to your problems is solicited.

OFFICERS OF COUNTY SOCIETIES

Who are the officers of the County Medical Societies?

The answer is found in the last part of the advertising section of The Journal, where a whole page is devoted to the names of the County Medical Societies, the presidents, the secretaries and their respective addresses.

There is no need to write an extra letter to the State Society, to waste two cents and an envelope. Ever since the Journal has been published the list of officers has appeared in each number of the Journal.

The minimum program for County Medical Societies has initiated requests for information by officers and members of County Medical Societies. These are indications that all the County Medical Societies are to have programs of activity. That co-operative relationships between and among societies are to be established; that members are to have scientific programs in each society and with regularity, and that each member will have an opportunity to serve his fellow practitioner and his fellowman.

To the officers of the various societies will fall the duty of fulfilling the requests made by Secretaries and committees of adjoining societies. Accept the duty as a privilege. Send a scientific program team in exchange for one from another county. Be a friend to your fellow practitioner and fellow officer. Find the list of secretaries in the last pages of the Journal.

For County Society officers to fail in the duty that is coming to each will mean failure for County Society programs. *Record progress, not failure.*

REPORTS

Reports of County Medical Societies are being written throughout the state as the activities of the various organizations are begun for the new year. Many, and perhaps all societies are discussing new programs. Secretaries and presidents are seeking new methods to bring about greater efficiency in Society activity. Speakers and programs are arranged, new problems are being solved. New plans are being adopted. Members are bringing constructive suggestions for the work of the Society. The minimum program is being adopted throughout the state. Speakers are coming with special papers and discussions. Scientific teams are going from one County Society to a neighbor Society. Members are being assigned public health talks by the Joint Committee on Public Health. County Societies, as units, are entering into toxin-antitoxin campaigns as community protective measures. The entire minimum program will be in action in every Medical Society of Michigan within the next month. Here is an array of accomplishment. How are we to know about it? How are members throughout the state to know what is being written into history? There is only one way to secure this information. Every secretary should record a complete record in his own books and send a complete report of every activity to the State Society for publication in the Journal.

Who knows what the future will demand of the history that is being written now in the records of County Medical Societies? Twenty, thirty, fifty years hence some one may wish to write a history of the science of medicine in Michigan. Could the archives of County Medical Societies serve a better purpose? Write reports and send copies to the Journal.

PUBLICITY

Editors of newspapers are interested in knowing the facts of Scientific Medicine. They are anxious to interpret them for their readers. Newspapers purpose to give information on all subjects, education, business, science, agriculture, sports, etc. Can they fulfill their position if they fail to give publicity to the Science of Medicine?

The question in this field is, where is the source for information, who knows what is being accomplished, who knows the newest contributions that have been recognized by the profession? The editor is interested in facts and the reliable source for securing them. The medical profession already is prepared, through its State and County organizations, to give editors of daily and weekly newspapers the facts relative to the science of medicine.

The County Medical Societies in Michigan are and should be the reliable source to which the editors can come for information on the science of medicine. Officers should meet with the editors and discuss with them the facts available to their respective newspapers.

The Cadillac Evening News gave half column front page space in three issues for the post-graduate conference held in Cadillac on October 8th. The following heading and paragraph give some idea as to the kind of publicity.

"Fifty-three Physicians Enjoy Addresses by Six Members of the Profession".

The physicians had a dinner at the Hotel McKinnon in the evening while at noon they were guests of the Exchange Club. Doctors Eggleston and Jackson were the speakers before the Exchangites and quite a group of Rotarians also attended the meeting.

The Sanitarium speaker stressed the progress that has been made in preventative medicine, pointing out that the medical profession aims to do all it can to prevent people from becoming ill. Doctors would rather be health advisors than life savers in a pinch, the speaker said. He predicted much greater progress in the future, showing how much farther animal husbandry has gone than human progress along health lines, largely because man pays so little attention to his own needs.

The Kalamazoo speaker voiced a message of optimism for the laity. He said that people were becoming better acquainted with their physicians. He traced the history of the discovery of bacteria and the benefits of research along that line. Medical progress also was referred to with the prediction that the future would bring much more than has the past, as each new step makes the next one surer.

The meeting was the most ambitious one the profession ever has held in Northern Michigan and was greatly enjoyed by the doctors of this district.

Each County Medical Society from time to time has opportunity to assist local editors by giving them reliable information on the science of medicine. The layman is interested in facts, not follies.

THIRTY-FOUR COUNTY SOCIETIES ADOPT THE MINIMUM PROGRAM

The minimum program for County Medical Societies has been adopted unanimously to this date by thirty-four County Medical Societies representing eleven Councillor Districts of the Michigan State Medical Society. The adoption of the program will directly affect twenty-five hundred members, or more than 75 per cent of the total membership.

During the past year the problem of the County Medical Societies has been considered by officers of societies throughout the state and by the Council and officers of the Michigan State Medical Society. In summarizing the suggestions and problems offered by the various officers a formulated program was developed and presented to the Executive Committee and the Council for approval. Both gave unanimous support to the program and recommended that all County Societies become active units in its development. In order to present the program to the County Societies a series of meetings was held by councillor districts of the constituent society officers and councillors to discuss the active work of each Society, present the minimum program and adopt it, if it met with the approval of the officers. At each the officers of the thirty-four societies gave unanimous approval to the program. The following meetings were held:

September 21—Ninth District, Cadillac. O. L. Ricker, Councilor.
September 22—Tenth District, Bay City. F. S. Baird, Councilor.
September 23—Eighth District, Saginaw. J. D. Bruce, Councilor.
September 24—Seventh District, Port Huron. A. J. MacKenzie, Councilor.
September 25—First District, Detroit. J. Hamilton Charters, Councilor.
September 26—Sixth District, Flint. H. E. Randall, Councilor.
September 30—Second District, Jackson. B. F. Green, Councilor.
October 1—Third District, Battle Creek. R. C. Stone, Councilor.
October 2—Fourth District, Kalamazoo. J. B. Jackson, Councilor.
October 13—Fifth District, Grand Rapids. B. R. Corbus, Councilor.
October 16—Eleventh District, Muskegon. Geo. L. LeFevre, Councilor.

The total number of officers and members of program committees who attended the conferences on the minimum program was ninety-eight, including the eleven Councillors. The officers of each Society agreed, in accepting the program for their society, to present it with full details to their respective members for full discussion and final adoption as soon as meetings could be arranged.

Each County Medical Society, in adopting the minimum program of activity for the coming year, has placed itself on a sound business and educational basis. Each organization will have a plan of work, will have a goal for the year established and will have active workers in the conduct of its affairs. The president and the secretary have their duties, but they alone cannot make an efficient and valuable Society. Each member of every Society has a piece of work to do and each should accept his duties as opportunities for the advancement of the profession and the science of medicine. In the scientific section of the program regular post-graduate activities may be conducted. The periodic health examination offers a field for the preservation of the health of the members and at the same time will help to make the physician the councilor on all health matters relative to the lay individuals of the community. The field of social endeavor may be so conducted as to bring about the most friendly relations among all members of the Society. Scientific teams are service-giving groups of members, who will give of their time to help their own Society and two or three adjoining Societies, and for such service each Society will receive service and benefits. The public is an indirect part of every Society. It waits with

an open mind to be informed on the science of medicine, the leaders, men of history who laid the foundations for modern medicine. The public hardly realizes that it is constituted of the most intricate and marvelous machine of all, and yet it never hesitates to take an ordinary automobile to the best mechanic available. Who can be the educators of the public but the members of County Medical Societies? The public offers a field of service for every physician.

By adopting the minimum program of activity County Societies have placed themselves on a sound basis for accomplishment for their members and for the advancement of the science of medicine.

THE CADILLAC POST-GRADUATE CONFERENCE

The second post-graduate conference of the Michigan State Medical Society for the Ninth District, held at Cadillac, proved to be one of the most successful conferences held in the state. The program was carried out as previously arranged. Dr. O. L. Ricker opened the conference with a few remarks in which he welcomed the visiting doctors who were in attendance.

"In behalf of the Michigan State Medical Society, I am proud to welcome you to a second conference, for it is with much gratitude on the part of the committee to know that they have been successful enough to have a call for the second in this district. Let us hope that we may today have the best meeting ever held."

Dr. J. B. Jackson, chairman of the Council of the Michigan State Medical Society, was present and made a few remarks relative to the work of this organization. The plans of the local committee were outlined to the physicians by Dr. W. J. Smith of Cadillac, who was chairman of the entertainment for the day.

The first talk on the program was given by Dr. Elmer Eggleston of Battle Creek, his subject being "Physical Examination with Demonstration." This not only was important to the medical profession, but to the laity. Dr. Eggleston was well able to put this subject over, he being one of the best of internists in Michigan, and when his 30 minutes were up many of the physicians called for more. Dr. J. B. Youman of Ann Arbor talked upon "Arthritis and Its Treatment" The State Board of Health was represented by Dr. G. Ramsey, who discussed the importance of protection from sore throat, especially the kind that is so prevalent at the present time, that of streptococcus sore throat.

The physicians met with the Exchange Club at noon. Dr. S. C. Moore presided and Doctors Eggleston and Jackson were the speakers. In the afternoon Dr. Schuster of the State Hospital of Traverse City, and Dr. Earl Campbell of the same institution, gave two very interesting papers on "Neurology."

Dr. J. B. Jackson gave an excellent talk on "Tuberculosis and the Value that the X-Ray Bears to the Diagnosis." Dr. H. E. Randall of Flint gave a very interesting paper on head injuries, which are so prevalent at this time, as so many people are being injured by automobiles, giving a very definite time when operations are to be performed. He also discussed the importance of early diagnosis of appendicitis, bringing out in his paper the fact that more people die from appendicitis than from auto accidents, thus advocating early operation.

One of the most important discussions in the afternoon was rendered by Dr. J. B. Youmans of Ann Arbor. He gave one of the best talks on "Essentials and Methods on Laboratory Diagnosis", how the local physicians could apply them and the value of the extensive work which the University of Michigan was doing along this line.

Following the 6 o'clock dinner at the Hotel McKinnon, Dr. Currie of Flint outlined the principle and value of a good, lively Medical Society to its community.

Mr. Wheeler, who was to talk on "Conservation of Forests", gave a very brief talk, and invited the physicians to come to the high school auditorium, where he gave his lecture the same evening.

Most of the physicians left for their homes about 9 o'clock, feeling that they had been amply repaid for their visit at Cadillac.

O. L. Ricker.

Deaths

Arthur L. Seeley, M. D., 1860-1925.

Resolved, By the Council of the Michigan State Medical Society that in the death of Arthur L. Seeley, of Mayville, who after having faithfully served his community for 31 years as a family physician, and who by his loyal allegiance as a member of the Michigan State Medical Society, and who by his knowledge and judgment for many years as a member of the Council has encouraged and promoted medical organization and progress, and who by his example of faithfulness, loyalty and sincerity has endeared him to us, be it

Resolved, That we tender to Mrs. Arthur Seeley and family our heartfelt sympathy in their great loss and may God in His wisdom assuage their grief. Be it also

Resolved, That copy of this resolution be placed on the minutes of the meeting and that a copy be sent to the bereaved family.

H. E. Randall
C. G. Darling
J. D. Bruce,
Committee.

County Society News

KALAMAZOO ACADEMY OF MEDICINE

KALAMAZOO CO.

MINUTES OF SEPTEMBER MEETING

The September meeting of the Kalamazoo Academy of Medicine was held on Tuesday the 15th, 1925. A fellowship dinner at the Bluebird Cafe preceded the meeting. The regular session of the Academy was called to order by the President, Dr. Light, and a report of the June meeting read by the Secretary.

Dr. Gregg discussed the policy of proceding the meetings by a dinner which had a tendency to decrease formality and increase attendance and sociability. He brought out the advantages of having the dinner in the Academy rooms and also the impossibility of giving such dinners without added equipment as an aid to service. He desired an expression by members of the Academy of their desires in the matter.

Doctors Crum, Barrett, Van Ness and Collins expressed themselves as favoring the dinners, and increased sociability brought about by the informal gatherings preceding the meetings.

Dr. Gregg made a motion that a committee be appointed to investigate the requirements and probable cost of the necessary equipment for serving dinners in the Academy rooms.

Seconded by Dr. Crum. Carried.

The president appointed the social function committee to make the necessary investigation and report.

Dr. Jackson, through the Secretary, reported that the Committee appointed to confer with the School Board awaited action from the School Board.

Doctors Crum and Sheppard reported as delegates from the State meeting. The program was carried out as published in the Bulletin.

The Executive Secretary of the State Medical Society at a conference with the officers of the Academy, October 2nd, presented: "The Minimum Program for County Medical Societies" which is being urged throughout the state. It is worthy of consideration.

The physical examination program is especially valuable in bringing before the public the advantage of periodic health examinations and in combatting the activities of some of the commercial laboratories which are encroaching the field of medicine.

Blanks for health examinations were standized by a committee appointed by the A. M. A. These blanks and a manual of suggestions for the conduct of periodic health examinations of apparently healthy persons may be obtained from The Journal of the A. M. A.

There should be some action taken on Section 3 of the proposed program if the Kalamazoo Academy of Medicine is to keep up with other Societies throughout the state. How would it be to have a committee appointed to investigate the possibilities in our Society?

The program is a Society program; not just a plan to keep the officers busy. Look it over and decide what you would like to do about it. Free discussion is desired.

HOUGHTON CO.

The Houghton County Medical Society held its regular monthly meeting Tuesday, October 6th, at the Miscowaubic Club, at 8:30 p. m. with 21 members present.

After reading of the minutes and allowing of the bills, a report of the Board of Censors was received in regard to Dr. Henry Holm. Dr. Roberts stated that Dr. Holm will pay his dues in the Marquette-Alger County Medical Society and request a transfer to the Houghton County Medical Society which will be submitted as soon as possible.

A motion was made by Dr. LaBine that the week of November 1st to November 7th be set aside for the annual physical examination of the members of the Society and their families.

Dr. J. W. Moore next presented a resolution with regard to free surgery for benevolent and fraternal organizations. Doctors Bourland, Joy and Moore were appointed to draw up a resolution which was signed by all present. I am inclosing a copy of this resolution which you will kindly print in The Journal and state that it has been signed and accepted by the Houghton County Medical Society.

The first paper on the program was read by Dr. E. Bicknell, of the C. & H. Staff, on "Insulin". Dr. Bicknell took up treatment of diabetes in its various forms, the diet, and treatment of coma. He covered the ground very thoroughly. This paper was discussed by Doctors Bourland and LaBine.

The next number on the program was a review of recent literature on "Mercurochrome" by Dr. Bourland. Dr. Bourland read extensively from Dr. Young's work on this subject. This paper was discussed by all present. The Society then adjourned to lunch.

I wish to state that I, as secretary, have been wonderfully pleased with the excellent attendance which we have been having, 21 members being out for our last meeting in spite of inclement weather.

The Houghton County Medical Society's action in taking up annual physical examination of the members and their families is certainly a wonderful step forward.

G. C. Stewart, Secretary.

BRANCH-HILLSDALE, LENAWEE CO.

The joint meeting of the County Medical Societies of the Counties of Branch, Hillsdale and Lenawee, was held at East Hall, Hillsdale College, on the evening of Tuesday, October 13th, at 6:30 p. m., the President, Dr. J. H. Johnson in the chair.

An excellent dinner was served, after which the reading of the minutes being deferred, the President introduced the speaker of the evening, Dr. J. D. Bruce, Internist, of the University of Michigan.

Dr. Bruce gave a highly interesting and instructive address on "Common Errors of Digestion," covering as far as possible in the limits of a single evening, the pathology prophylaxis diagnosis, prognosis and treatment of this important group of diseases.

Dr. Bruce's paper was quite fully discussed by Doctors Sawyer, Wade, McLain, Robson, Hall, Oliver, Green, McFarland and others, all of whom

brought out important points from the great fund of their experience.

A number of questions were answered by Dr. Bruce in closing the discussion, after which a rising vote of thanks was given the doctor for his illuminating address.

The question of the "Minimum Yearly Program for the County Societies" was brought up and Dr. Sawyer expressed as we believe, the sentiment of the members present, by saying, "I think the members of this Society are willing to carry out the 'Minimum Program' as outlined by the State Society, as far as possible."

After the meeting, the desirability of continuing the joint meeting of the three Societies was discussed and on account of their geographic position, the officers of the Lenawee County. Society declined to continue the arrangement, at least during the winter months.

The question, so far as the Branch and Hillsdale County Societies are concerned, was left open for the present at least.

Adjourned.

D. W. Fenton, Secretary.

ALPENA CO.

The regular meeting of the Alpena Medical Society was held at the New Alpena House on Thursday, October 16th, at 6:30 o'clock. Doctors Newton and Foley entertained at dinner.

Present—Doctors Bell, McDanniels, O'Donnell, Newton, Foley, Sahs, Bertram, Secrist and Williams. Following the dinner Vice-President Secrist called the meeting to order and introduced Dr. O'Donnell, who read a very interesting paper on "Injuries of the Kidney." The paper was discussed by all the physicians present.

On October 19th the Alpena County Medical Society will have charge of the program for the Bay County Medical Society at Bay City. The following is the program:

"Influence of Weather Conditions on Health," Frank Permin, Local Meterologist, U. S. Weather Bureau.

"The Physician and the Specialist," Dr. S. T. Bell.

"Injuries of the Kidney," Dr. F. J. O'Donnell.

C. M. Williams, Secretary.

IONIA-MONTCALM CO.

The fall meeting of the Ionia-Montcalm Medical society was held at the Winter Inn Hotel, Greenville, Mich., Thursday evening, October 15th, 1925. Twenty members were present to enjoy the excellent dinner served by the management.

The first speaker of the evening was Dr. Alexander Campbell, Grand Rapids, who spoke on the subject, "Acute Pelvic Infections."

The subject was introduced by saying that four microorganisms were largely responsible for all acute pelvic infections:

1st, Neisser's coccus; 2nd, Streptococcus; 3rd, Staphlococcus; 4th, Coli communis.

Dr. Campbell made a plea for more careful examinations of patients coming to the office with minor pelvic complaints, and, if possible, to determine by bacterlogical examinations of smears, the predominating micro-organism present producing the infection.

He emphasized the fact that gonorrheal infections in women are accompanied by very little pain or symptoms which in many cases permitted them to pass through physician's offices untreated, and remarked that these cases were cured only by painstaking treatment over a long period of time or until the last organism in the genital tract was destroyed.

In discussing the various streptococcus types of infections, stress was made in regard to care used in treating septic abortions and obstetrical deliveries. The principal points were:

1st, Obstetrical conscience; 2nd, Matricular care; 3rd, Reduce all injury to minimum; 4th, Surgical repair.

This discussion was well received and a free discussion was indulged in by those present.

The second address of the evening was given by Dr. J. B. Whinnery, of Grand Rapids. His subjest was "Coronary Closure".

Dr. Whinnery presented in detail the finer points in diagnosis, pathology and treatment in his usual masterly manner.

The intense interest taken in this rather rare condition was manifested by the many questions asked by the members present.

A rising vote of thanks was extended the visiting physicians for the excellent program rendered.

A motion was made and unanimously carried to table the question of deciding the Minimum program of County Societies, until next meeting.

F. A. Johnson, Secretary-Treasurer.

JACKSON COUNTY

The September meeting of the local Society was held at Hanover, 16 miles from Jackson, in the Odd Fellows' Hall, with Doctors J. D. Van Schoick and H. H. Frazier, of that village, as hosts. The meeting was preceded by a chicken dinner served in the lodge room by the local chapter of Rebekahs and after the dinner the members adjourned to the auditorium. Dr. Glenn Hicks, president of the Society, introduced the mayor of the village, who made an address of welcome. The Hanover Mixed Quartette won a great deal of applause by their harmony and the speaker of the evening, Dr. W. J. Z. Deacon, of the State Board of Health, Lansing, then gave an address on "Public Health". The meeting was in the nature of an experiment, being the first of a series of popular lectures to which the general public will be invited. Although the meeting was well advertised, the attendance of the laity was rather slim, although those who did attend enjoyed every minute of the speaker's address which was in terms that they could readily understand.

The meeting was honored by the presence of three visitors from Hillsdale: Dr. Sawyer, regent of the University; Dr. B. F. Greene, councillor of the second district, and Dr. Bower. These three motored up to look us over and evidently had a good time.

Dr. L. F. Thalner, city physician for the past three years, has tendered his resignation to take effect November the first, when he will go into general practice with offices in the Sun Building. His successor, another Michigan graduate, is Dr. Earl Ritchie, a former resident of this city, but a general practitioner in Detroit since his graduation.

Dr. Stanley H. Reich, concerning whose illness we made mention last month, was taken to the Peter Bent Brigham Hospital in Boston and operated by Dr. Cushing, who found a neuroma in the base of the cerebellum. Dr. Reich made a rapid recovery from the operation and is now home, but his eyesight has not yet returned.

Dr. R. E. Newton, a graduate of St. Louis University Medical School, 1924, has taken over Dr. Reich's offices in the Carter block and will do general practice.

Dr. H. H. Frazier, formerly of Hanover, has sold his practice there and moved to Jackson with offices in the Rogers Building.

The August meeting of the County Society was held at the Hayes Wheel Club, Round Lake. Swimming, baseball, and barnyard golf featured the early evening program after which a splendid dinner was served and the meeting called to order. Addresses were made by Dr. Bruce, now head of the department of medicine at Ann Arbor and Dr. Haines, the new superintendent. The names of Dr. Frazier and Dr. Nobert were reported on as elected to the County Society. Dr. Nobert is in general practice in Henrietta.

As I write this, the news comes over the phone of the death of the only son of Dr. E. F. Lewis, Donald Lewis, age 8 months, of intestinal flu, with complications.

The Jackson Clinic has added to its staff, Dr. Stonehouse, formerly of the University of Michigan X-ray Department, as roentgenologist.

Our next meeting, the monthly October meeting, is the annual clinic month, but due to conflicting dates of other larger intersectional and national meetings in this month, the clinic will be held either the first or the second Thursday and Friday of November. A more definite announcement will be made later and we hope that our neighbors in Battle Creek, Marshall, Albion, and Lansing may see fit to attend. One-half day will be devoted to a symposium on "Physiotherapy." The speakers and the clinicians will be recognized experts in their respective lines and the two days should be worth while.

GRATIOT-ISABELLA-CLARE

The G. I. C. met in the Alma City Hall Thursday, September 24, at 8 p. m. to hear the report of the delegate to the State Society meeting, and to talk over plans for the winter meetings. The delegate was not present, so we did not have a real report, but the opinion of those who attended the State Society meeting was that it was a good program, but the Hall was a poor place to hear the speakers.

It was planned to have the annual banquet in December, and to secure a speaker on a non-medical subject.

The following motion was made and carried: "That the Secretary write the Chairman of the Legislative Committee to get a definite plan of action arranged for repeal of the statute which takes away the remunerations for reporting births and T. B. cases, and increases the penalty for failure to report the same."

Please publish in your correspondence department.

E. M. Highfield, Secretary.

WAYNE COUNTY

ANNUAL REPORT

REPORT OF THE PUBLICATION COMMITTEE—1924-1925

The results of the Publication committee's efforts have been before the entire membership each week during the past year so that any elaboration of its work is unnecessary now. Suffice it to say that the aim of the Committee and the Editor has been to maintain the Bulletin at as high a level as was attainable in fulfilling the needs of the medical profession—with a weather eye constantly peeled for keeping public opinion with us at all times. To this end we have refrained from taking issue too strenuously on certain matters so as to avoid unwarranted criticism of the profession at large, and have directed our efforts solely toward improving the status of the Society and its members. The attempt on our part to hasten the provision of a new clubhouse, for example, was prompted by the realization that this was and still is a most effective means for keeping the membership of the Society from splitting up into small units, while the campaign for Periodic Health Examination was aided and abetted by us because the profession needed to be awakened to the importance of keeping this type of work for itself.

As for financial returns, the Bulletin earned for the Society the sum of $1,063.68—a rather tidy amount when it is considered that no appreciable expense is incurred by the Society in the process of publication. The advertising in the Bulletin has become better paying since publication of our weekly has been continued throughout the entire year—a practice which ought to be continued for a variety of good reasons.

The Official Bulletin Publishing Company deserves commendation for its splendid efforts at making our Bulletin rank high among the many similar publications.

Respectfully submitted,

Wm. S. Reveno,
Editor and Chairman,
Committee on Publication.

MEMBERSHIP COMMITTEE REPORT—1924-25

Total active membership	1,234
Total paid up active members	1,154
Total delinquent	80
Life member	1
Resident associate	28
Total paid up resident associate	23
Delinquent	5
Honor members	5
Honorary members	10
Inactive	5
Total membership	1,359
Deaths	16
Transfer to other societies	3
Total number of new members for the year	118

Of which 85 are active, 27 are resident associate and 6 non-resident associate.

All of which is respectfully submitted.

J. Ham. Charters,
Chairman of Membership Committee.

DETROIT CLINICAL BULLETIN COMMITTEE REPORT—1924-1925

Shortly after Dr. Stapleton became President, the Detroit Clinical Bulletin Committee was appointed to develop a daily Bulletin of the medical work of the city, the committee consisting of a representative of each hospital as follows:

W. D. Barrett, M. D., Harper Hospital.

C. S. Kennedy, M. D., Grace Hospital.

R. C. Andries, M. D., Providence Hospital.

S. G. Penberthy, M. D., Children's & Mich. Mut.

S. I. Condit, M. D., St. Mary's Hospital.

Geo. VanAmber Brown, M. D., H. P. General Hospital.

Ed. Lynch, M. D., St. Joseph's Mercy Hospital.

C. C. McClintoc, M. D., Delray Industrial Hospital.

I. G. Downer, M. D., Jefferson Clinic.

D. J. Leithauser, M. D., Deaconess Hospital.

B. U. Estabrook, M. D., Herman Keifer Hospital.

A. H. Whittaker, M. D., Receiving Hospital.

The clinical work of the Lincoln and the U.S. Marine Hospitals and the Florence Crittenden Home is also scheduled daily.

The methods of the Bulletins of other cities were studied, the plan of publication drawn up and presented to the Council. The Council granted permission to the Society House Secretary to act as Director of the Bulletin, her duties in no way to interfere with her work for the Society. The Council specifically stated that the Society would in no way be responsible for any debts incurred and while sponsoring the publication of the Bulletin the Society would in no way help the Bulletin financially. It was thus necessary to publish the Bulletin by popular subscription. The cost of publication was estimated at twenty-five hundred dollars for the first year.

In order to determine the distribution of this cost, the number of operations performed during the previous eleven months and the number of surgeons was ascertained.

There were sixteen hopitals, two of which declined to publish their clinical work, namely the Henry Ford Hospital and the Detroit Diagnostic Hospital. There were five hundred and nine surgeons of the various staffs, and thirty thousand seven hundred and ninety-four operations were performed during the eleven months previous to the publication of the Bulletin. The total amount was easily obtained.

Harper Hospital	40 %	11,750
Grace Hospital	14 %	3,944
Providence Hospital	14 %	3,928
Children's Mich. Mut. Hosp.	.....	.....
St. Mary's Hospital	12 %	3,382
St. Joseph's Mercy Hospital	3.2%	786
Jefferson Clinic	1.3%	350
Delray Industrial Hospital	.4%	106
Receiving Hospital	6.6%	1,821
Herman Kiefer Hospital	.....	.....
Highland Park General Hospital	6.7%	1,857

Mrs. Helen Spencer was appointed Director by the Committee. The first Bulletin was published May 4, 1925.

The Bulletin is distributed each night by messenger to all of the Hospitals, medical colleges and surgical instrument houses and to visitors at the hotels. Seventeen copies are mailed daily to subscribers, etc. The hospital staffs have co-operated without exception.

The actual publication is being done very efficiently and in a form which has brought many letters of congratulation to the director, Mrs. Spencer. The committee hopes that the medical department of the hospitals will make a greater effort to have their work scheduled, particularly the medical ward walks and autopsies.

September 21st, 1925.

Amount collected	$1,927.60
Amount pledged	575.00
Total amount received	$2,502.60
Salaries, supplies, etc.	1,158.40
Cash on hand	769.20

The committee for the second year of the publication of the Bulletin have the work of developing a wider distribution for the Bulletin, giving full publicity throughout the state and country so that the visitors will know that the Bulletin is at their service.

The committee hopes the Bulletin will be most enthusiastically supported during the second year, both financially and with material for publication. The committee also wishes to extend to the President, Dr. William J. Stapleton, their appreciation of his continuous help to Mrs. Spencer for her untiring efforts in the interests of the Bulletin. Mrs. Jane White of the Chicago Bulletin also rendered valuable assistance.

Detroit Clinical Bulletin Committee.

LEGISLATIVE COMMITTEE REPORT

As Chairman of the Legislative Committee, it gives me a feeling of gratification to report to you the success attained by your committee at Lansing.

Knowing that the chiropractors of the State would try every scheme to get bills passed, this committee secured lists of the members of the legislature and senate early in the fall of 1924 and made the acquaintance of as many as possible.

The committee as a whole responded to any call for special work when it was needed, and I desire to take this opportunity to thank them for their support throughout the session. I do not wish to elaborate or extol the work done last year, but hope the members of Wayne County will read this report, as I wish to warn, or better still, post each one on what is best to do.

As you know, there is the regular chiropractor who obtains his license by going before the Medical Board for examination, and there is the "outlaw," who spends a few weeks or months in study. The licensed men have no use for the outlaw, but cannot condescend to be examined by the Medical Board, so they want a bill to have their own examining board, while the outlaw wishes a bill to license all who have been in practice two years, and have the equivalent of a high school education (which might mean anything), their own laws and their own board of examiners. First of all, they had no license to have the two years of experience, and if they have their chiropractor bill passed in the state, all the work of our boards of health of the state and counties, medical research, and study of our universities would be for naught, because, not believing in the germ theory, a special adjustment would cure a case of diphtheria, smallpox, syphilis, or anything.

Serious attention must be given to this condition by the members of our profession, because the people, with their legislators and senators, have been educated to think that the medical men are jealous of this supposed new school of medicine, and are working tooth and nail to keep from practicing because it would hurt the medical practice. I have been told this story by members of our legislative bodies at Lansing, and it was given as the reason why they supported a chiropractor bill. The standard of education is low, medicine, dentistry, etc., must be raised instead of being thrown open to the winds to allow a few semi-educated pseudo-professional thousands to destroy what has been done in the past century for the people. I wish to advise every physician in the State of Michigan to get acquainted with the legislator or senator from his district and to explain to them the situation as it is and how it would be, should legislation be passed to license all the chiropractors, magnetors, etc. This is a very serious situation, and if every physician followed the above advice, and each state member of our legislature had a dozen men visit him, with the same story, they would see the true condition and protect their own people, their electoral and the state at large.

During the past year three bills have been launched at Lansing, two by the outlaws, and one by the registered chiropractors. Any one of the three was worse than the others. The Wayne County Medical Society should be thankful that the Legislative Committee of the State Society were on their toes, that many members of the Health Committees in the senate and legislature were druggists, and that your own committee was awake. Somehow, in some way, legislation will be "put over" if you do not act as stated.

I wish to personally thank Senators Condon, Green and Dr. F. Bohn, and Legislators Reid of Detroit, Peters of Monroe and Upjohn of Kalamazoo. All three bills, during last session at Lansing, were kept in committee and never saw the light—so you can see how the above named gentlemen deserve our thanks.

The expense of your County Committee was nominal and has been paid by the Treasurer.

The Legislative Committee of the Chiropractor State Society collects Fifteen Dollars a week from each practitioner to use for propaganda, lawyer fees and lobbying expenses, etc., while we medical men "kick" about our state medical fee of Twenty Dollars a year.

Let us all waken up to the fact that we are living in the present century, that there are many new upstarts that envy the position held by our profession, and they will sacrifice honor, religion or anything, to get a foothold. To protect the public, we must be on the alert and counteract any "wildcat" legislation by educating the men going to Lansing to act as our goverment law makers.

I am,

Yours truly,

R. E. Loucks, M. D.,
Chairman Legislative Committee.

September 1, 1925.

ENTERTAINMENT COMMITTEE REPORT

During the fiscal year this Committee has arranged and managed a number of entertainments. The dates of these entertainments and the program are briefly as follows:

September 29, 1924, Smoker.

November 24, 1924. Feather Party.

January 27, 1925. Dinner for Chas. H. Mayo, M. D., and Henry S. Plummer, M. D. of Mayo Clinic, Rochester, Minn.

March 16, 1925. Dinner for Robert B. Osgood, M. D., of Boston, Mass.

March 30, 1925. Smoker.

June 10, 1925. Testimonial dinner for F. W. Robbins, M. D.

All of these meetings were very well attended and the members of the Committee therefore feel well repaid for their efforts.

Besides arranging these regular entertainments the Committee has also taken care of out of town guests who came here to lecture before our Society. Dinners were arranged for these guests and were well attend as a rule.

There is a balance of $33.53 in the hands of the Committee which will be turned over to the chairman for the coming year at any time.

The Chairman takes this opportunity of thanking all members of this Committee for their efficient help and great willingness to work on all occasions when called upon.

B. Hjalmar Larssan,
Chairman Ent. Com.

NECROLOGY COMMITTEE REPORT

Your Committee on Necrology has to report the loss of sixteen members through death during the past year. The previous committee reported only six deaths for the period 1923-1924 so that our loss this year has been a heavy one.

Among the departed were two honorary members, Oscar A. LeSeure and C. Henri Leonard, a former president of the old Wayne County Mediial Society and one honor member, William C. Stevens. These members lived long and valued lives of three score and ten years or more and had all retired from active practice of the medical art.

Only one of the active members reached the allotted limit of seventy years, Willard Cheney. B. D. Harison, the veteran secretary of the State Board of Registration in Medicine, came within a year of doing so, while a number were cut off between the fortieth and fiftieth years. One ex-president of the present Wayne County Medical Society, E. W. Haass, is to be numbered among our dead.

As soon as possible after the demise of each member a brief note appeared in the Bulletin, and it will be sufficient here to recall once more the list of our losses.

Oct.	6, 1924.	James A. Watson.
Oct.	14,	James A. McGraw.
Nov.	3,	Carroll L. Storey.
Nov.	4,	Moses Fechheimer.
Nov.	12	William C. Stevens.
Nov.	19.	Anna Odell.
Dec.	6,	Beverly D. Harison.
Dec.	7,	Chas. A. Bird.
Dec.	8,	Malmolm McColl.
Mar.	3, 1925.	John H. Rock.
Mar.	6,	Willard Cheney.
Mar.	7,	Francis O. Reilly.
Apr.	17,	Theodore Schmalzreidt.
May	13,	Oscar A. LeSeure.
July	10,	Ernest W. Haass.
July	31,	C. Henri Leonard.

Respectfully submitted,

Ray Connor, M. D.,
Chairman.

PUBLIC HEALTH EDUCATION COMMITTEE REPORT

Three years ago the Wayne County Medical Society conceived the idea of conducting an educational campaign among the laity of Detroit and Wayne County for the purpose of informing them in a simple way regarding the present status of medical and surgical knowledge. It has been felt that to take the public into our confidence and to inform them as far as they are able to intelligently understand the various phases of preventive medicine will safeguard them against the claims of irregulars and charlatans. The public health education committee of the Wayne County Medical Society is a unit of the public health educational forces of the State of Michigan known as the State Joint Committee on Public Health Education. There are nine of these units which comprise the State Joint Committee. Professor W. D. Henderson, who is at the head of the University Extension Department occupies the position of Secretary of this State Joint Committee. The Committee of the Wayne County Medical Society have found the services of Professor Henderson very valuable in securing local audiences. He has been able to obtain a hearing for speakers chosen by your committee when a direct appeal might be construed as a matter in which the physician of Detroit "had an axe to grind."

The number of public health lectures given in Wayne County during 1924-25 was an increase of 60 per cent over the number of lectures assigned for 1923-24. The total number of lectures given in Wayne County amounted to 134 as follows: Demouth 1; Redford 2; River Rouge 1. The average attendance per lecture in Detroit was 172. The total attendance for 1924-25 was 21,106. The average attendance during the year closed was considerably lower than the year before. This decrease was due in large part to the fact that a number of health lectures were given during 1923-24 in the large auditorium of the Cass Technical High School, where the attendance was 3,000 at each lecture. It has been the experience of doctors that the smaller audience is easier to lecture to and the address is apt to be much more effective in the smaller audience than those from 500 and up. The following doctors delivered public health lectures in Detroit during the year 1924-25:

Dr. M. D. Campbell
Dr. H. L. Clark
Dr. Suzanne Sanderson
Dr. F. E. Curtis
Dr. M. B. Kay
Dr. John L. Chester
Dr. W. H. Gordon
Dr. F. G. Buesser
Dr. H. A. Reye
Dr. N. Ginsburg
Dr. A. L. Jacoby
Dr. C. L. Straith
Dr. H. M. Rich
Dr. H. F. Crossen
Dr. W. H. McCracken
Dr. W. J. Stapleton, Jr
Dr. W. D. Henderson (Ann Arbor)
Dr. David W. Haskins
Dr. G. L. Keifer
Dr. J. H. Dempster
Dr. R. E. Loucks
Dr. Louis Klein
Dr. B. C. Lockwood
Dr. A. F. Jennings
Dr. A. Altshuler
Dr. H. R. Carstens
Dr. J. B. Kennedy
Dr. Chester Doty
Dr. L. J. Hirschman
Dr. A. C. Thompson, D. D. S.
Dr. Douglas Donald
Dr. W. E. Kahn
Dr. T. B. Cooley
Dr. E. D. Spalding
Dr. O. M. Gruhzit
Dr. T. K. Gruber

All of which is submitted.

J. H. Dempster.

COMMITTEE ON NURSES REPORT

The Committee on Nurses has had no matters referred to it by the Council. It has received no communications.

The Chairman has attended with some regularity the meetings of the Council and rendered such service as he has been called on to perform.

Respectfully,

B. Raymond Hoobler.

LECTURESHIP FOUNDATION COMMITTEE REPORT

During the past year four lectures have been given under the management of this Committee for the Beaumont Foundation. The first three lectures were given by Dr. Chas. H. Mayo and Dr. H. S. Plummer of Rochester, Minnesota, dealing historically and practically with the subject of thyroid diseases. The attendance at these meetings was the largest we have had since the Foundation was established. The fourth lecture was given by Professor Robert E. Osgood of the evolution of Orthopaedic Surgery." This lecture laid the foundation for the future work to be done especially for the promotion in a broad surgical way of orthopaedic medicine. It is earnestly desired by the Committee that a permanent subscription list of names shall be established for the book publications of these lectures.

Respectfully submitted,

James E. Davis,
Chairman.

CANCER COMMITTEE REPORT

Mr. President and Members of the Wayne County Medical Society:

Gentlemen:

Your Cancer Committee for the year 1924-25 met early in October and discussed plans for the work of the Committee during the year. It was decided not to follow the plan of other years of trying by means of lectures before lay organizations, theatres, etc., to educate the public, the sentiment being that inasmuch as so very little is actually known concerning the cause and treatment of cancer, there was necessarily a divided professional opinion and that to try to educate the public as to what should be done for cancer, under the circumstances we were causing confusion.

We deemed it more rational to do what we could to educate ourselves in the latest work on the diagnosis of cancer, and so better prepare ourselves to inform the public on this important question. Consequently this plan was carried out:

A joint meeting was held with the American Roentgen Ray Society at its mid-winter session in Detroit, February 19-21. To this meeting we brought the American College of Surgeons' Bone Registry. Doctor Codman, of Boston, who has charge of the Registry and his able assistant, Miss Gilmore, accompanied the exhibit. After this meeting the exhibit was continued at the Wayne County Medical Society building, from February 21st to the 28th. This exhibit was attended daily by a large number of physicians and students and we are sure the benefits were worth the effort. For a beginning, we thought this first exhibit of this kind in the city was a great success.

We also brought Dr. Bainbridge, of New York, to Detroit, who delivered a lecture on Cancer before the joint meeting of the Wayne County Medi-

cal Society and the American Roentgen Ray Society.

The expense of the Society for the exhibit was $276.00, most of which was for the purchase of illuminating boxes, which are the property of the Society and it is hoped will frequently be used for exhibits of various kinds.

Respectfully submitted,
The Cancer Committee.
Rollin H. Stevens, Chairman.

PROGRAM COMMITTEE REPORT

Under the auspices of this Committee there were held 33 meetings during the year. Of these there were 19 presided over by local talent while 14 were presided over by men from out of town. The papers were presented to this Society by 59 men of whom 14 were from out of the city and 45 were from our own Society.

Arrangements were made to offer evenings to the staffs of the various hospitals. The following hospital staffs presented programs:

1. Receiving Hospital.
2. Providence Hospital.
3. St. Mary's Hospital.
4. Harper Hospital.
5. Grace Hospital.

These were for the most part conducted in the form of symposia.

Joint meetings were held with the A. P. H. A., the Detroit Gynecological Society, Detroit Dermatological Society, and The American Roentgen Ray Society.

The following men from out of the city appeared before us:

Dr. Rosenow, Rochester, Minn.; Dr. Fraenkel from Vienna; Dr. Warthin from Ann Arbor; Dr. Henry Schmitz, Chicago; Dr. Reyn, Denmark; Dr. Camp, Ann Arbor; Dr. C. H. Mayo, and Dr. H. S. Plummer, Rochester, Minn. Dr. Paccini, Chicago; Dr. Kretschmar, Chicago; Dr. Mosher, Kansas City, Mo.; Dr. Osgood, Boston; Dr. Hickey and Dr. Frank Wilson of Ann Arbor.

The program for the medical section meetings was provided by Dr. J. L. Chester, and his secretary Dr. Spalding.

That for the Surgical section meetings by Doctors G. V. Brown and Geo. Burr, I wish at this time to thank them for their splendid work.

Our thanks are also due to our worthy President, Dr. William J. Stapleton, who at all times supported the Committee and assisted it in every possible way.

There were at all times plenty of material of excellent worth and it has indeed been a pleasure to arrange the program for this Society during the preceding year.

Harry L. Clark, M. D.,
Chairman of the Committee.

LIBRARY COMMITTEE REPORT

The Committee begs to report encouraging growth and usefulness of the Medical Library.

Established volumes July 1st, 1924, 19,067.
Added volumes 1924 and 1925, 2,024.
Total volumes in Library, 21,091.
Total number of people using library, 14,429.

This is by far the largest number of persons using the library in any one year.

Among the accessation during the year are several sets to complete our files, among those being the:

British Journal of Physiology, Vol. 1 to 51 complete.

Jahrbuch F. Kinderheilkunde, 49 vol.

Transact of Ophthalmology Society of United Kinkdom, 43 volumes.

Among the gifts received the most important were the following:

Foreign Surgical books and periodicals, some rare and valuable, Dr. F. W. Hutchings.

Archiv fur Verdauungkrankheiten, vol. 24-34, 1919, 1924-25, from Dr. C. D. Aaron.

Review of Applied Entomology, Series B. Medical and Veterinary, vol. 4-11, 1916-23, from Parke, Davis.

Bulletin de la Societe de Pathologic exotique, vol. 9-13, 1916, from Parke, Davis.

Chemical Abstracts, parts of vol. 1-12, from Mrs. Jackman. Journal of American Chemical Society, parts of vol. 29-40, from Mrs. Jackman.

Mention should also be made of the gift to the Society of an excellent portrait of Dr. Benjamin Waterhouse, by Dr. Guy L. Kieffer.

Your Committee feels that the library is progressing rapidly under the auspices of the City Library Commission and we are pleased to report the utmost co-operation and cordiality in their relations with the Committee.

Respectfully submitted,
Herbert M. Rich,
Chairman of Library Committee.

ETHICS COMMITTEE REPORT

My dear Dr. Stapleton:

I beg herewith to submit report from the Ethics Committee for the past year. We held six meetings and disposed of approximately thirty cases all of which were of a personal nature, having had no complaints during the real relative to institutions.

Very truly yours,
Wm. P. Woodworth, M. D.,
Chairman, Ethics Committee.

Among the Books

A Review and Frank Appraisal of Medical Books That are Proffered to the Profession by Publishers.

OLD AND NEW VIEWPOINTS IN PSYCHOLOGY—Some Interpretations and Applications of Psychological Principles, by Knight Dunlap, Professor of Experimental Psychology in the Johns Hopkins University. Baltimore; formerly President American Psychological Association. The C. V. Mosby Co., Publishers, St. Louis.

This volume contains three public lectures delivered at the Johns Hopkins University and two papers read before the Southern Society of Philosophy and Psychology. The lectures on Mental Measurements and on Present Day Schools of Psychology were delivered under the auspices of the Johns Hopkins University and the lecture on The Psychology of the Comic was delivered under the auspices of the Johns Hopkins Women's Club. The paper on Psychological Aspects of Spiritualism was read at Macon, and the paper on Reading of Character from External Signs at Memphis.

The lecture on Mental Measurements was prepared with the co-operation of Dr. Buford Johnson

and Mr. Schachne Isaacs of the Staff of the Department of Psychology of Johns Hopkins, and represents therefore a departmental viewpoint instead of merely the author's personal opinions. We believe that the points made in this lecture are of great importacne and that they should be carefully considered by every psychologist as well as every other person working in the mental measurement field.

The four other lectures represent the author's own conclusions primarily, but have had the benefit of the criticisms of his two colleagues.

OBJECTIVE PSYCHOPATHOLOGY—By G. V. Hamilton, M. D., Director Psychobiological Research, Bureau of Social Hygiene, Inc., New York City. With foreword by R. M. Yerkes, Ph.D., LL.D., Professor of Psychology, Yale University. Published by the C. V. Mosby Company, St. Louis, Mo.

This book is essentially a psychopathologist's account of his studies and interpretations of various modes of human and animal behavior. It is meant to reflect the importance of effecting such studies by the use of scientifically formulated methods of research as an essential supplement to the always useful but never quite trustworthy method of field and clinical observations.

The results of Dr. Hamilton's work are here offered to physicians, social workers and lay readers who may share with him a hope that in time psychopathologic research will make possible the construction of textbooks devoted to systematic accounts of the human personality as an integration of adjustive functions, each of which may be regarded as playing a recognizable role in the determination of total response to particular types of situations.

PHYSIOLOGICAL CHEMISTRY—C. J. V. Pettibone, Ph.D., University of Minnesota. Third edition. Price $3.25. C. V. Mosby Company, St. Louis, Mo.

MEDICAL CLINICS OF NORTH AMERICA—(New York numberXSeptember, 1925). Issued serially, one number every other month). Vol. IX, No. II. Octavo of 271 pp., 24 illustrations. Per clinic year, (July 1925 to May 1926) paper, $12; cloth, $16 net. W. B. Saunders Company, Philadelphia, Pa.

An excellent number.

TEXTBOOK OF ORTHOPEDIC SURGERY—For Students of Medicine, by James Warren Sever, M. D., Assistant Orthopedic Surgeon, Children's Hospital, Boston. Instructor in Orthopedic Surgery, Harvard Medical School, Etc. Price $4.50. The MacMillan Company, New York.

Received:—

THE ART OF MEDICAL TREATMENT—By Francis W. Palfrey, M. D., Visiting Physicians, Boston City Hospital; Instructor in Medicine, Harvard University. Octavo of 463 pp. Cloth, $4.50 net. The W. B. Saunders Company, Philadelphia, Pa.

A manual that might be of value as a quick refernce with reliable suggestions for suitable treatment methods.

DEVELOPMENT OF OUR KNOWLEDGE OF TUBERCULOSIS—L. F. Flick, M. D., 738 Pine St., Philadelphia. Price $7.50.

A concise review, discussion and summary of tuberculosis.

FEEDING AND THE NUTRITIONAL DISORDERS IN INFANCY AND CHILDHOOD—Julius H. Hess, M. D. 4th Edition. F. A. Davis Company, Philadelphia. Price $4.50.

A splendid, useful text whose merit is attested by this fourth edition. It places in the hands of teachers and students an excellent guide for infant feeding and care of nutritional disorders. It is well illustrated and cites instructive case histories. Every doctor will find it a most helpful consultant,

HYPEREMESIS GRAVIDARUM: TREATMENT BY INTRAVENOUS INJECTIONS OF GLUCOSE AND CARBOHYDRATE FEEDINGS

Intravenous injection of glucose for hyperemesis gravidarum, first recommended in two previous communications by Paul Titus, Pittsburgh, and his co-workers (Journal A.M.A., Aug. 15, 1925), has now come to be an accepted method of treatment. Because of a diversity of opinions on such matters as the dose of the sugar, the preparations of glucose to use, the concentration of the solutions, and the frequency of the injections, detailed directions are outlined in this paper. The principal points to be observed are that: (1) the therapeutic dose of glucose for an adult of average size is from 50 to 75 gm., and smaller doses do not give the desired effect; (2) any preparation of glucose for intravenous administration must be chemically pure because reactions in the patient are usually traceable to impure or carelessly prepared solutions; (3) hypertonic solutions (preferably 25 per cent) act more promptly and favorably than weak solutions, and (4) single injections are safer than a continuous flow, but must be repeated from one to three times daily according to the condition and response of the patient. Favorable results are now reported in a total series of 328 cases of hyperemesis gravidarum treated by high carbohydrate feedings or intravenous injections of glucose. Therapeutic abortion was performed four times, and three of these patients died. Two of these cases were clinically to be classed as acute yellow atrophy of the liver. The basis for the treatment of hyperemesis gravidarum by glucose and other carbohydrates whether given by vein, by mouth, or by bowel is to be found in the physiologic assumption that there is a carbohydrate deficiency in the maternal organism. This deficiency occurs as the result of an unusual demand for carbohydrates made by the growing fetus, and a diminished carbohydrate intake in the patient's diet, thus being a combination of indirect and a direct starvation. Pregnancy toxemia and starvation are not identical, for additional factors undoubtedly are involved. Every pregnant woman is a potential subject for toxemia, and if by a starvation of carbohydrates the liver is depleted of its reserve glycogen, its detoxicating action is thereby impaired, and a more profound effect from toxins from whatever source is thus made possible. Carbohydrate deficiency in pregnancy toxemia probably is the cause of part of the central necrosis of the liver lobules seen in fatal cases, its action being the same as that by which simple starvation produces similar necrosis. The action of glucose is propably twofold: (1) a direct liver-sparing effect, and (2) a stimulation of the storage properties of the liver cells, which is practically identical with regeneration and repair. Ampules of concentrated glucose solution which may be diluted as required are now being prepared by reliable pharmaceutic firms, and may be obtained for emergency use or when laboratory facilities are not available. A limited but fairly comprehensive experience with the combined use of insulin and glucose injected intravenously has led to the belief that this is of no clinical advantage. Moreover, there is evidence to show that insulin actually causes glycogen stores to become depleted, by its demand for glucose to be oxidized and otherwise metabolized. In toxemia of pregnancy, therefore, in which storage in the liver and not combustion of the injected sugar is the desired result, the simultaneous administration of insulin is contraindicated.